EXHIBIT 7

RESPONSE TO COMMENTS
REISSUANCE OF NPDES PERMIT NO. MA0101613
SPRINGFIELD WATER AND SEWER COMMISSION
SPRINGFIELD REGIONAL WASTWATER TREATMENT FACILITY AND 24 COMBINED SEWER OVERFLOW OUTFALLS
AGAWAM, MASSACHUSETTS

On November 15, 2017, the U.S. Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") released a draft National Pollutant Discharge Elimination System ("NPDES") permit for public notice and comment for the Springfield Regional Wastewater Treatment Facility and 24 Combined Sewer Overflow outfalls ("CSOs") (the "2017 Draft Permit"). Upon a request from the Permittee, EPA extended the initial 30-day public notice and comment period to February 12, 2018. Following requests for a public hearing from the Connecticut Department of Energy and Environmental Protection ("CTDEEP") and others, EPA reopened the public notice and comment period from March 14, 2018 through April 27, 2018 and held a public hearing on April 24, 2018. During the public notice and comment periods on the 2017 Draft Permit, EPA received written comments from Springfield Water and Sewer Commission ("SWSC" or the "Permittee"); the Town of Agawam, Massachusetts, the Town of East Longmeadow, Massachusetts, the City of West Springfield, Massachusetts, the Town of Wilbraham, Massachusetts (together, "Co-Permittees"); CTDEEP, the Connecticut Fund for the Environment and Save the Sound ("Save the Sound"), the Connecticut River Conservancy ("CRC"), the Massachusetts Water Resources Authority ("MWRA") and Paul Hogan. At the public hearing, testimony was provided by CT DEEP, Bill Lucy of Save the Sound, Andrea Donlon of the CRC, Joshua Schimmel of the SWSC, and Jack Looney of Save the Sound.

After considering the comments received, EPA determined that different nitrogen and CSO notification requirements were necessary to protect water quality in the Connecticut River and Long Island Sound and to protect recreational uses in the Connecticut River, and accordingly published a revised Draft Permit ("Revised Draft Permit") on August 17, 2018. At the request of the Permittee, the public comment period was extended to October 15, 2018. Comments on the Revised Draft Permit were received from the SWSC, CT DEEP, the Connecticut River Conservancy, Save the Sound and MWRA.

Following a review of the comments received, EPA and MassDEP ("Agencies") have made a final decision to issue the permit authorizing this discharge. The Agencies have benefited from the various comments and additional information submitted. While the information and arguments presented did not raise any substantial new questions concerning the permit, EPA did make certain clarifications and other revisions to the final permit in response to comments. These improvements and changes are detailed in this document and reflected in the final permit. In accordance with the provisions of 40 CFR §124.17, the comments received and EPA's responses to those comments, including a description of any changes made to the permit as a result of those comments, as well as any clarifications EPA considers necessary, are described below.

This permit is being jointly issued by EPA and MassDEP. EPA will generally present responses to comments as EPA's and MassDEP's, even where the reference is only to EPA. MassDEP's certification and joint issuance of the permit establishes that MassDEP affirms EPA's

response. Accordingly, this document represents the joint determinations of EPA and MassDEP, which are reflected in separately enforceable discharge permits issued under federal and state law.

A copy of the Final Permit may be obtained by calling or writing Meridith Finegan, United States Environmental Protection Agency, Region I, 5 Post Office Square – Suite 100, Mail Code OEP06-1, Boston, Massachusetts 02109-3912, Telephone (617) 918-1533. Copies of the Final Permit and the Response to Comments may also be obtained from the EPA Region I website at https://www3.epa.gov/region1/npdes/permits_listing_ma.html.

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Appendix A – Summary of Out-of-Basin Loads 2013-2018
Appendix B – Combined Sewer Overflows Background

SUMMARY OF CHANGES TO THE FINAL PERMIT

1. Cover Page – Clarification that the Final Permit supersedes both NPDES Permit No. MA0101613, signed December 8, 2000, as well as NPDES Permit No. MA0103331, signed September 30, 2009. See Response 32.
2. Cover Page – Clarification that the co-permittees are responsible for Parts C (Unauthorized Discharges), D (Operation and Maintenance), and E (Alternate Power Source) in the Final Permit. See Response 1.
3. Cover Page – Titles revised to reflect current organizational structure at EPA and MassDEP.
4. Part I.A.1., page 3 – Removal of the following statement: A bypass of secondary treatment is allowed when wet weather influent flow exceeds the wet weather capacity of the secondary treatment. See Response 2.
5. Part I.A.1. – Addition of seasonal total phosphorus effluent monitoring requirement and footnote directing reader to ambient total phosphorus upstream ambient monitoring requirement in Part I.H. See Response 75.
6. Part I.A.1., page 5 – Revision to include a total nitrogen effluent limit of 2,794 lbs/day. See General Response.
7. Part I.A.1., Footnote 3 – Revision to include the following: "A bypass of secondary treatment is subject to the requirements of Part II.B.4. and Part II.D.1.e. of the permit". See Response 2.
8. Part I.A.1., Footnote 3 – "Total influent flow" has been defined as "the instantaneous flow at the time of the closest measurement taken when the bypass of secondary treatment commenced as well as when it was terminated." See Response 2.
9. Part I.A.1., Footnote 3 – The requirement to measure flows which bypass secondary treatment using a meter shall become effective within six months of the effective date of the permit. See Response 2.
10. Part I.A.1., Footnote 3 – Correction of typographical error.
11. Part I.A.1., Footnote 3 – Revision to read as follows: "The Permittee shall not add septage to the waste stream at the treatment plant during activation of the secondary treatment bypass". See Response 12.
12. Part I.A.1. and Part I.H. – The date on which the *E. coli* limitations go into effect has been revised to one year from the effective date of the permit. Interim *E. coli* monitoring is required until the limits go into effect. Fecal coliform limits and monitoring requirements remain in effect until the *E. coli* limits take effect. See Response 17.
13. Part I.A.1., Footnote 4 – Removal of the following statement: "Any changes to the routine sampling program must be reviewed and approved in writing by EPA and MassDEP". See Response 23.

14. Part I.A.1., Footnote 4 – Addition of language clarifying that occasional deviations from the routine sampling program are allowed, provided the reason for the deviation is documented in correspondence appended to the applicable discharge monitoring report that is submitted for the monitoring period in which a change in the sampling program was necessary. See Response 23.

15. Part I.A.1., Footnote 4 – Addition of language requiring the use of sufficiently sensitive test methods. See Response 18.

16. Part I.A.1., Footnote 6 – Revision to allow up to six months from the effective date of the permit for the Permittee to either submit information to EPA regarding their preferred method of collecting a composite sample of the influent or to comply with the composite sample collection method in the permit. See Response 21.

17. Part I.A.1., Footnote 8 – Removal of the defined minimum level for total residual chlorine monitoring. See Response 18.

18. Part I.A.1., Footnotes 10 and 11 – Clarification of how total nitrogen, average monthly load and maximum daily load values are to be calculated and reported. See Response 22 and Response 44.

19. Part I.A.1., Footnote 10 (footnote 9 in the Draft Permit) – Removal of references to allowable TN increases upon the completion of CSO reduction projects. See Response 48.

20. Part I.A.1., Footnote 12 (footnote 10 in the Draft Permit) – Removal of reference to "C-NOEC". Removal of Attachment B from the Final Permit (Freshwater Chronic Toxicity Test and Procedure and Protocol) and removal of references to this attachment from footnotes 12, 14 and 15 (footnotes 10, 12 and 13 of the Draft Permit) of the Final Permit. See Response 113.

21. Part I.B. – All CSO monitoring and reporting requirements have been consolidated under Part I.B.4. for clarification and to eliminate redundancy. See Response 43.

22. Part I.B.3, subparagraphs. have been re-numbered. References to subparagraphs in this Response to Comments use the correct numbering unless specifically noted.

23. Part I.B.3.a. – Clarification that documentation of the implementation of the Nine Minimum Controls (NMCs) has been submitted and is under review by EPA and MassDEP. See Response 7.

24. Part I.B.3.a., second sentence in third paragraph – Modification to read as "must include the controls identified in Part I.B.3. of this Permit". See Response 7.

25. Part I.B.3.b. – Following Revision (revised language in italics): "Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected, at a minimum of once per month, to ensure that they are in good working condition and adjusted to minimize combined sewer discharges (NMC # 1, 2 and 4). *For any structure that is inaccessible, a description of the conditions which preclude the inspection from taking place shall be recorded and shall be included with the annual inspection certification that is sent to EPA and MassDEP*, as required by this section. See Response 8.

26. Part I.B.3.c. – Clarification that the prohibition on discharges to the combined collection system during wet weather when CSOs may be discharging does not apply to domestic sources. See Response 12.

27. Part I.B.3.d. – Addition of the definition of dry weather. See Response 10.

28. Part I.B.3.e. – Definition of a "discharge event" as "any time there is flow discharged from any CSO outfall, including discontinuous flow, that occurs during a precipitation-related event". "Precipitation-related" includes rainfall, snowfall, and snowmelt. See Response 9.

29. Part I.B.3.e. – References to "National Weather Service" rain gages have been replaced with "SWSC rain gages". See Response 9.

30. Part I.B.3.g., Public Notification – Extension of the deadline for the submittal and implementation of the public notification plan to within 12 and 24 months of the effective date of the permit, respectively. See Response 42.

31. Part I.B.3.g. – Addition of the requirement for CSO notifications to be posted on the Permittee's website. See Response 86.

32. Part I.B.3.g. – Removal of references to "affected party" and "affected entities". See Response 42.

33. Part I.B.3.g.- Clarification that the annual notification shall include information on "CSO impacts on water quality". See Response 42.

34. Part I.B.3.g., Public Notification, Supplemental Notification – Removal of the requirement to include CSO volume data in the supplemental notification. See Response 42.

35. Part I.B.4., Annual Notification – Clarified to read as follows: "**Annually, no later than April 30th,** the Permittee shall submit a report summarizing activities during the previous calendar year relating to compliance with the nine minimum controls. The annual report shall include the CSO outfall monitoring data required by Part I.B.5. of this permit". See Response 9.

36. Part I.B.5. – This section has been consolidated under Part I.B.4.

    "CSO Outfalls" has been changed to "Combined Sewer Overflow Outfall Monitoring" for clarification.

    Combined Sewer Overflow Outfall Monitoring – removal of the requirement to submit CSO monitoring data with monthly DMRs. This information shall be submitted with the annual report. See Response 9 and Response 43.

    Footnote b. has been modified to read as "For those months in which a CSO discharge does not occur, the Permittee must indicate "no discharge" for the outfall for which data was not collected." Addition of Footnote c, which states "This information shall be submitted with the annual report required by Part I.B.4. of this permit."

37. Part I.D.2. – Correction of typographical error in the first statement. See Response 33.

38. Part I.D.4.k – Revision to include "to the extent feasible." The Final Permit also requires the following: "If certain information is determined to be infeasible to obtain, a justification

must be included along with the map. If EPA disagrees with the assessment, it may require the map to be updated accordingly." See Response 13.

39. Part I.G.1. – Modification of the due date for completing necessary revisions to local limits. See Response 16.

40. Part I.G.3. – Modification of the due date for submitting the annual pretreatment report to April 30th. See Response 30.

41. Part I.H., Special Conditions, allows the Permittee up to one year from the effective date of the permit to comply with Part I.B.2.a.(6). (Control of Solids and floatable materials in CSOs) of the Final Permit as is it applies to outfall 042. See Response 6.

42. Part I.H., Special Conditions, allows the Permittee up to one year from the effective date of the permit to comply with Part I.B.2.a.(6). (Control of Solids and floatable materials in CSOs) of the Final Permit as is it applies to outfall 042. See Response 6.

43. Part I.H., Special Conditions – Addition of ambient total phosphorus monitoring. See Response 75.

44. Part I., Attachment E – Revision to remove the attachment entitled "Allowable TN Load Increases", as the higher load limit in the Final Permit accounts for any additional loading that may result from the completion of CSO projects. References to allowable TN load increases following the completion of CSO projects have also been removed from the cover page and footnote 10 to Part I.A.1. See Response 48.

45. Part I.I.2. of the Final Permit has been modified to clarify the date by which an attachment that is submitted using NetDMR will be considered timely. See Response 14.

GENERAL RESPONSE TO COMMENTS ON LONG ISLAND SOUND ("LIS") NPDES OUT-OF-BASIN TOTAL NITROGEN PERMITTING APPROACH

Numerous comments were received regarding the new total nitrogen ("TN") effluent limits. This General Nitrogen Response ("General Response") provides a comprehensive explanation of the overall approach EPA has adopted to address TN effluent limitations for out-of-basin POTWs discharging to Long Island Sound, taking into account the Clean Water Act (CWA or "the Act"), implementing regulations, case law and varied technical and policy considerations. It addresses the comments received regarding the new TN effluent limits and is referenced in many of the responses to those specific comments that follow.

While this permitting approach governs the application of TN effluent limits in the specific permit here and allows EPA to place those limits within a wider frame of reference in order to explain their derivation, EPA underscores that NPDES permits are adjudicated on a case-by-case, permit-specific basis. The limits imposed here, in other words, do not set a precedent for other permittees, and do not bind EPA, or other regulated entities, in future permit proceedings, which will be adjudicated based on their own administrative records.

I. Introduction and Description of Permitting Approach[1]

EPA has adopted a systemic, state-by-state approach to control out-of-basin loading of nitrogen pollution into Long Island Sound from POTW point sources in Massachusetts, New Hampshire, and Vermont, through the coordinated issuance of individual NPDES permits ("Out-of-Basin Permitting Approach"). These out-of-basin facilities have not been assigned waste load allocations ("WLAs") under the Long Island Sound Total Maximum Daily Load[2] ("TMDL") approved by EPA in 2001. The task of allocating nitrogen loads among these facilities in a manner that ensures compliance with water quality standards, as required under Section 301 of the Act, falls to EPA. That EPA would implement any necessary reductions through the issuance and oversight of NPDES permits was expressly assumed by the TMDL. Uncontested on the record before EPA in this permit proceeding

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[1] The NPDES out-of-basin permitting approach described here is distinct from the Long Island Sound Nitrogen Reduction Strategy. In December 2015, EPA sent a letter to the environmental agency commissioners of MA, CT, NY, VT and NH setting forth a post-TMDL EPA Long Island Sound Nitrogen Reduction Strategy (the "LIS Strategy") for waters in the LIS watershed. The strategy recognizes that more work may need to be done to reduce nitrogen levels, further improve dissolved oxygen ("DO") conditions, and attain other related water quality standards in LIS, particularly in coastal embayments and the estuarine portions of rivers that flow into the Sound. EPA is working to establish nitrogen thresholds for Western LIS and several coastal embayments, including the mouth of the Housatonic River. Currently, EPA is responding to comments on the agency's threshold modelling methodology from the public, external technical reviewers and our state and county partners. Documents regarding the LIS Strategy are available for public access on EPA's Long Island Sound website (http://longislandsoundstudy.net/issues-actions/water-quality/nitrogen-strategy/). Upon completion of establishing thresholds and assessing the water quality conditions of the estuarine waters of the Connecticut River, allocations of total nitrogen loadings may be lowered if further reductions are necessary. Thus, while EPA's current systemic NPDES permitting approach discussed in this general comment, and embodied in this permit, does not currently rely on data from the LIS Strategy, future efforts to establish permit limits could be informed by relevant data and recommendations that result from the LIS Strategy effort. If reductions are needed for the SWSC discharge, a lower water quality-based effluent limit will be added in a future permit cycle. If so, EPA anticipates exploring possible trading approaches for nitrogen loading in the Massachusetts portion of the Connecticut River watershed.

[2] Connecticut Department of Environmental Protection and New York State Department of Environmental Conservation, *A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* (LIS TMDL), December 2000.

are two facts: first, that significant amounts of nitrogen from out-of-basin facilities are discharged to the LIS watershed (as much as 6 million pounds per year, based on the sum of the maximum annual discharge from each out-of-basin discharger from 2013 to 2017) and, second, that ongoing nitrogen-driven water quality impairments exist in LIS.

When confronting the difficult environmental regulatory problem of controlling or accounting for dozens of discharges into a complex water body like Long Island Sound, EPA was presented with a variety of potential permitting approaches. Long Island Sound is a nitrogen-impaired water body spanning 1,268 square miles that implicates the sometimes divergent interests of five states, dozens of municipalities and numerous non-governmental organizations ("NGOs"), along with interested members of the public. In developing its overarching permitting approach, as well as each individual permit, EPA carefully considered, but ultimately rejected, several possible alternatives, on two principal grounds: (1) that they were not sufficiently protective to assure that all the applicable requirements of the Act would be met (*i.e.*, they lacked enforceable TN effluent limitations to *ensure* as a matter of law that nitrogen loads would be maintained at protective levels), or (2) that they would entail unwarranted uncertainty and delay (*i.e.*, they called for the development of new or revised TMDLs or for development of extensive new data collection or modelling in an attempt refine or pinpoint necessary targets and loads, even though the permits at issue have long-since expired and water quality impairments are ongoing).

Rather than approach this complex permitting task on an *ad hoc* basis, EPA instead fashioned a systemic permitting approach designed to comprehensively regulate nitrogen loading from out-of-basin nitrogen sources on a gross, basin-level scale. EPA addressed the existing TN loading to ensure achievement of the following overarching objectives:

- the overall out-of-basin TN load does not increase in accordance with antidegradation requirements, given that the LIS is already nitrogen impaired, through the imposition of enforceable effluent limits that are annual average mass-based, consistent with the assumptions of the TMDL;
- no individual facility is left with an effluent limit that is not achievable using readily available treatment technology at the facility's design flow; and
- smaller facilities can achieve their limits through optimization.

EPA's derivation of effluent limitations to implement these objectives, based on its best professional judgment and information reasonably available to the permit writer at the time of permit issuance, consists of three essential parts:

- First, EPA *identified* the existing aggregate load from all contributing facilities in a given state.
- Second, because Long Island Sound is already nitrogen impaired and failing to achieve applicable water quality standards,[3] EPA *capped* that load to avoid contributing to further impairments and fully protect existing uses.

[3] CTDEEP, Interstate Environmental Commission, EPA, *2019 Long Island Sound Hypoxia Season Review*, available at: http://www.iec-nynjct.org/sites/default/files/2020-07/FINAL_LISound-Hypoxia-2019-Combined-Report_april2020.pdf

- Third, EPA *allocated* the load according to a water quality-related consideration rationally related to achieving water quality standards in Long Island Sound and carrying out the objectives of the Act.

In the case of Massachusetts, that consideration was facility *size*, with loads distributed based on the design flow of the POTW treatment plants. In deriving design-flow-based effluent limitations, EPA utilized the following methodology:

- EPA estimated the current maximum out-of-basin annual point source load using data for the five years prior to the year of the Draft Permit, consistent with Region 1's ordinary practice of using the most recent five years of data in the derivation of effluent limits for permits, which is in accordance with the recommendation in EPA guidance to use three to five years and, by use of the longer timeframe, is intended to more fully capture a representative data set[4] (see estimate of recent effluent loadings in Appendix A);
- It prioritized effluent limits for major POTW facilities with design flow greater than 1 MGD, consistent with the definition of major facility in 40 CFR §122.2;[5]
- It developed mass-based rolling annual average TN effluent limits based on design flow (consistent with 40 CFR § 122.45(b)(1)) and effluent concentrations that can achieved by means of currently available nitrogen removal technology for all facilities and the design flow for each facility, where effluent limit (lb/day) = Concentration (mg/L) x Design Flow (MGD) x 8.345;
- For POTW facilities with design flow less than 10 MGD, EPA based limits on concentrations that can typically be achieved through optimization, with more aggressive optimization expected for facilities with design flow greater than 5 MGD; and,
- For the four POTW facilities with design flow greater than 10 MGD (which together comprise more than half of the total Massachusetts load to LIS), EPA based limits on concentrations achievable through optimization or upgrades.

EPA's intention in establishing a total nitrogen limit in this and future permits for out-of-basin dischargers is not specifically to achieve greater nitrogen reductions, but rather to cap the out-of-basin contribution in a manner that provides assurance to the downstream state that total nitrogen loading will not increase with population or economic development. That assurance is provided by means of enforceable effluent limits.

Although EPA considered caps for individual dischargers at their current loadings, that approach was rejected because these effluent limits are subject to statutory antibacksliding requirements of CWA § 402(o) which would prevent a limit from being increased if flows increase due to new residential or industrial development. Therefore, a facility currently discharging well below its design flow, could be unable to meet the loading limit if, for example, a new industrial discharger were to tie in, even if that discharger were willing to invest in readily available treatment technology. EPA examined out-of-basin loads across the watershed and developed effluent limits that are

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[4] *NPDES Permit Writer's Manual*, EPA-833-K-10-001, September 2010, page 5-30, available at: https://www.epa.gov/sites/production/files/2015-09/documents/pwm_2010.pdf.

[5] *NPDES Permit Writer's Manual*, EPA-833-K-10-001, September 2010, page 2-17, available at: https://www.epa.gov/sites/production/files/2015-09/documents/pwm_2010.pdf.

achievable through optimization or readily available treatment technologies for all facilities, even if they are operating at their design flow. EPA has determined that this approach will be protective of water quality and will carefully monitor receiving water response over the permit term and adjust as necessary. EPA recognizes that Connecticut and New York have very substantially reduced their nitrogen loadings into LIS and water quality conditions have improved, although LIS is not yet fully achieving water quality standards. Additional work is being undertaken in New York and Connecticut to further reduce nitrogen loadings into LIS. It will take time to allow the impact of these reductions to be fully realized and for designated uses to be fully restored. EPA believes that this approach reasonably balances the need to hold overall TN loadings constant to avoid exacerbating ongoing nitrogen-driven environmental degradation against the inherent scientific and technical uncertainty associated with receiving water response in a water body as complex as LIS. More stringent limitations on the out-of-basin dischargers are therefore not necessitated at this time.

The basis for establishing mass-based effluent limits using facility design flow and 5, 8 and 10 mg/L as total nitrogen concentrations that facilities can meet by means of optimization or, for the four largest facilities, readily available treatment technology, meets the legal requirements of the CWA, as described in this General Response, Section III, but was derived in order to balance the burden of treatment with the four largest facilities (currently generating approximately 51 to 58 % of the Massachusetts out-of-basin load) required to meet 5 mg/L concentration at design flow, and the remaining facilities with effluent limits that can be achieved through system optimization. In tiering the facilities, EPA considered the relative magnitude of flows from these facilities and observed that there was a significant divide between the four largest facilities and the remaining facilities (67 MGD for Springfield, 17.5 MGD for Holyoke, 17 MGD for Pittsfield and 15 MGD for Chicopee compared to 8.6 MGD for North Hampton). The four largest facilities contribute 53% of the design flow for the out-of-basin watershed. EPA also observed that three of these facilities are on the main stem of the Connecticut River and Pittsfield is on the mainstem of the Housatonic, so there is little or no attenuation of nitrogen. All of these factors, in EPA's technical judgment, warranted the further additional assurance of meeting water quality standards provided by a more stringent numeric cap in loading that may necessitate a facility upgrade, as opposed to limits achievable through optimization only. (EPA also notes that the four larger facilities will be able to spread the cost of any upgrade over a much larger user base).

EPA chose the next cut off at 5 MGD partly on the assumption POTWs of greater than that size are likely to already possess the technical capability, operator sophistication and administrative capacity needed to achieve more stringent effluent limitations via optimization requirements. (To this point, EPA took notice of the fact that the 5 MGD threshold has some regulatory significance under EPA's regulations implementing the NPDES program, specifically pretreatment, where EPA determined that facilities of that size are significantly large enough to require a pretreatment program). EPA, of course, also took into account the relatively large magnitude of the loads associated with these facilities. Finally, EPA also took note of the fact that these facilities, though not serving communities as large as Springfield, Holyoke, Pittsfield and Chicopee, still have considerable ability to spread costs over user bases of considerable size.

EPA chose the 1 MGD cut off because that corresponds to the definition of major POTW under NPDES regulations. Facilities above 1 MGD account for approximately 80% of the total out-of-basin load. Because the many (41) facilities smaller than 1 MGD collectively account for a relatively

small amount of the total load, EPA believes that optimization is a reasonable point of departure for these facilities, given their comparatively small loads and user bases.

Finally, those facilities under 0.1 MGD are required to monitor and report data that may be used in future permitting cycles.

Thus, in arriving at its tiering determination, EPA considered a series of technical and environmental factors within its expertise, and also took into account equitable considerations. EPA acknowledges that the chosen tiers are not the only way to divide the out-of-basin TN allocations, but was not presented with any alternatives that capped the existing load based on design flow through the imposition of enforceable permit limits. For example, EPA considered, and rejected, the option to apply a limit based on 8 mg/L effluent limit for all facilities with design flow greater than 1 MGD (at their respective design flows) because that would result in an increase in the current loading and place a greater burden on facilities that service relatively small communities. The combined design flow for the 29 MA POTW facilities with design flow greater than 1 MGD is 196 MGD. Of this combined design flow, 60%, or 117 MGD consists of the design flow for the four largest POTWs. Under the selected permitting approach, the proportion of the permitted load from the four largest facilities will be 60% of the combined permitted load for all 29 MA facilities, consistent with the proportion of design flow. If all POTWs with design flow over 1 MGD had a concentration-based limit of 8 mg/L (or a load based limit based on 8 mg/L and design flow), the proportion of the permitted load coming from the four largest facilities would increase from 60% of the total permitted load to 90%, shifting the burden of treatment significantly from larger to smaller facilities. In addition, the total permitted TN loading from those 29 facilities would increase from 8,100 lb/day under the chosen approach to 8,600 lb/day.

II. Refinement of Out-of-Basin Permitting Approach From 2017 & 2018 Draft Permits to Final Permit

The 2017 Draft Permit proposed, in part I.H, special conditions requiring the facility to optimize system operation to meet an annual average mass-based TN optimization benchmark of 2,279 lb/day. In the Fact Sheet, EPA invited the public to also comment on two alternatives to the optimization benchmark in the Draft Permit. All three options included optimization with three different optimization benchmarks based on SWSC operation in recent years (2012-2016). The options were intended to be similar to the approach that had been taken to implement the 2000 TMDL in other out-of-basin permits, based on an agreement forged in 2012 among the five LIS watershed states, known as the "Enhanced Implementation Plan" (EIP).[6] The EIP included the following requirements for out-of-basin point source dischargers:

> Consistent with the 2000 TMDL[i], EPA and the tributary states will implement a tributary state wastewater treatment plant (WWTP) permitting strategy with a goal of essentially capping existing WWTP total nitrogen loads at or near existing levels until agreement is reached on final allocations and how they will be achieved.
>
> i. Cap upstream state WWTPs at or near existing total nitrogen loads.

[6] Long Island Sound Study Steering Committee, NY, CT, MA, NH, VT, *Enhanced Implementation Plan for the Long Island Sound Total Maximum Daily Load*, 2012. Available at: https://neiwpcc.org/our-programs/pollution-control/lis-tmdl/.

ii. Require optimization studies for upstream state WWTPs.

iii. Establish nitrogen monitoring requirements.

Footnotes:

[i] Example permit language from a permit issued in 2010 for the Town of Charlestown, NH WWTP 1) For optimization studies: Within one (1) year of the effective date of the permit, the Permittee shall complete an evaluation of alternative methods of operating the existing wastewater treatment facility to optimize the removal of nitrogen, and submit a report to EPA and NHDES-WD documenting this evaluation and presenting a description of recommended operational changes. The methods to be evaluated include, but are not limited to, operational changes designed to enhance nitrification (seasonal and year-round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. The Permittee shall implement the recommended operational changes in order to maintain the existing mass discharge loading of total nitrogen. The annual average total nitrogen load from this facility (2004 – 2005) is estimated to be approximately 60 lbs/day. The Permittee shall also submit an annual report to EPA and NHDES-WD, by February 1st of each year that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and tracks trends relative to the previous year. 2) For nitrogen monitoring requirements: Total kjeldahl nitrogen, ammonia nitrogen, nitrite nitrogen, and nitrate nitrogen samples shall be collected concurrently and the results reported once per month. (Weekly monitoring is required at facilities with greater than 1MGD design flow). The results of these analyses shall be used to calculate both the concentration and mass loadings of total nitrogen (total nitrogen = total kjeldahl nitrogen + total nitrate nitrogen + total nitrite nitrogen).

[ii] EPA and the delegated states will enforce permits consistent with the requirements of the permit with consideration given to the quality of the data used to determine the annual average nitrogen load limit and the overall strategy objective of capping existing WWTP annual average total nitrogen loads. The annual average total nitrogen load (in lbs/day) is equal to the sum of the average daily total nitrogen loading values for each month from January through December (in lbs/day), divided by 12.

Although the three TN effluent requirement options in the 2017 Draft Permit all included optimization language similar to the language provided in the EIP (footnote i), they differed in that none of them based the benchmark on the average SWSC TN discharge from 2004-2005 because SWSC had long expressed concern that the 2004-2005 estimate of 1,628 lb/day was based on limited data and was artificially low.[7] In developing the 2017 draft permit, EPA looked to the last five years of data available at that time (2012-2016), as is typical when evaluating effluent data for other pollutants (see Fact Sheet pages 11 to 25). The average annual load for 2012-2016 was 2,279 lb/day and the highest annual average loading for 2012-2016 was 2,534 lb/day. The three benchmarks proposed were:

- *2017 Draft Permit proposal:* optimize operations to meet a benchmark of 2,279 lb/day, based on the average calendar year TN load from 2012 to 2016.
- *Alternative 1:* optimize operations to meet a benchmark of 2,534 lb/day based on the maximum calendar year TN load from 2012 to 2016.
- *Alternative 2:* optimize operations to meet a benchmark of 8 mg/L to encourage a consistent level of treatment at the facility.

EPA considered extensive comments received in writing and orally during a public hearing and concluded that none of the options presented in the 2017 Draft Permit would provide assurance over the long term that nitrogen pollution from SWSC would not cause or contribute to further degradation of LIS and exacerbate the DO impairment. As a result, EPA developed a revised Draft Permit in 2018 which included a mass-based effluent limit of 2,534 lb/day (as a 12-month rolling monthly average), the optimization requirement from the 2017 Draft Permit (without the

[7] SWSC reiterated that concern in their comments on the 2017 Draft Permit Comments submitted by Joshua D. Schimmel, Executive Director, SWSC to EPA by Letter Dated February 9, 2018. Also, see Comment 27 below.

benchmark), and permission to request incremental increases in the TN effluent limit upon the completion of four planned combined sewer overflow (CSO) projects, according to increments defined in the permit.

In deciding on a TN effluent limit for the 2018 Draft Permit, EPA considered the overall purpose of including a TN effluent limit. As the intention of that limit was to cap the load at a level that the facility was already achieving, consistent with the approach taken to develop optimization benchmarks thus far, EPA found the highest annual average load (2,534 lb/day) to be more appropriate than the average annual average load (2,279 lb/day) because the effluent limit is a rolling annual average, and the highest annual load best represented the peaks in the rolling average that may occur during the year. On the other hand, the option to set the limit at 8 mg/L without a loading limit at all was rejected because of the substantial load increase that would have resulted (allowing the TN loading to increase from 2,534 lb/day to 4,473 lb/day).

In responding to comments on the SWSC Draft Permits, EPA identified a need to develop a new comprehensive approach to total nitrogen loading limits for out-of-basin dischargers to the LIS watershed and developed the approach described above. See:

- Comments 24, from SWSC: "While EPA certainly has some latitude in allocating the allowable TMDL wasteload among individual dischargers, the fairest and most straightforward way to do this is based on design flows."
- Comment 82, from CRC: "CRC requests that EPA set an enforceable permit limit that is consistent with anti-backsliding provisions and is based on the design flow of the plant."

EPA presented the new approach to the public at two public meetings in June of 2019 and issued three permits with total nitrogen effluent limits in September 2019. In response to comments received regarding the need for a fair and comprehensive approach based on design flow and consistent with the new approach for facilities with design flow greater than 10 MGD, the total nitrogen effluent limit for SWSC has been revised in the Final Permit to 2,794 lb/day and the incremental CSO-related allowable increases allotted in the 2018 Draft Permit have been removed.

At the same time, EPA disagrees that it would be reasonable to allocate a loading to SWSC based on 8 mg/L at design flow (resulting in increasing SWSC's allocated load from 2,794 lb/day to 5,429 lb/day). By itself, SWSC currently contributes 16% of the average out-of-basin load for the whole LIS watershed and 19% of the average out-of-basin load for the Connecticut River. With a design flow of 67 MGD, SWSC is the largest POTW discharger on the entire Connecticut River (the next largest is Hartford MDC at 60 MGD), and nearly four times the size of the next largest POTW among out-of-basin dischargers (the next largest is Holyoke at 17.5 MGD). At its current average flow of approximately 36 MGD, the load allocation in the permit requires SWSC to meet a concentration of approximately 9 mg/L on an annual average basis, which the facility is already achieving. It is reasonable to expect that if influent flow and nitrogen loadings increase, driven by increased population or industrial development, SWSC will work to achieve lower nitrogen concentrations in future permit cycles. This is a similar or even lower expectation to those at similar and smaller POTWs in Massachusetts, Connecticut and Rhode Island which contribute to nitrogen impairments in downstream coastal waters.

III. Statutory, Regulation and Environmental Context for EPA's Chosen Out-of-Basin Permitting Approach

Below, EPA explains the applicable statutory and regulatory structure, as well as the rationale for adopting this particular approach in lieu of others advanced on the record.

National Pollutant Discharge Elimination System Permits Generally

NPDES permits use two statutory mechanisms to protect water quality: (1) water quality standards, and (2) effluent limitations. *See generally* CWA §§ 301, 303, 304(b); 40 CFR pts. 122, 125, 131. Water quality standards are promulgated by states and approved by EPA. *See* CWA § 303(c)(2)(A); 40 CFR §§ 131.10-.12. The CWA and its implementing regulations require permitting authorities to ensure that any permit issued complies with the CWA and the water quality standards of all states affected by the discharge, which in this case are comprised of Massachusetts, Connecticut and New York. *See* CWA §§ 301(b)(1)(C), 401(a)(1)-(2); 40 CFR §§ 122.4(d), .44(d)(1). The State of Connecticut comments on the permit and requested that it include an effluent limitation for nitrogen.

Effluent limitations serve as the primary mechanism in NPDES permits for ensuring compliance with a state's water quality standards by imposing limits on the types and amounts of particular pollutants that a permitted entity may lawfully discharge. *See* CWA §§ 301(b)(1)(C), 401(a)(1)-(2). Effluent limitations for pollutants are based on the control technology available or are based on achieving the water quality standards for the receiving water. CWA § 301(b)(1)(a)-(c). The nutrient limits here are water quality-based effluent limitation, commonly referred to as "WQBELs," and are intended to comply with Connecticut's applicable narrative nutrient water quality standard and its antidegradation policy.

Impaired Waters and Total Maximum Daily Load

The CWA establishes a process by which states identify and manage waters where pollution control technologies alone are not stringent enough to achieve applicable water quality standards. CWA § 303(d). These identified waters, where the applicable water quality standards have not yet been attained, are commonly referred to as "impaired" waters or "nonattainment" waters and are prioritized by the states on a list that is commonly referred to as a "303(d) list." *Id.* Once a water is identified on a 303(d) list, the state develops a management plan for bringing these waters into compliance with water quality standards. CWA § 303(d)(1)(C)-(D). This process includes setting priorities for establishing TMDLs for individual pollutants in the impaired waters. *Id.*

A TMDL defines the amount of a pollutant that a waterbody can assimilate without exceeding the state's water quality standard for that waterbody. CWA § 303(d)(1)(C). TMDLs are set at a level that incorporates seasonal variations of the waterbody and a margin of safety that takes into account gaps in knowledge. *Id.* The TMDL then allocates a portion of the receiving water's pollutant loading capacity among facilities discharging to the impaired waterbody. 40 CFR §§ 130.2(h), 130.7. These wasteload allocations ("WLAs") for point sources, which are based on the underlying water quality standards, serve as a basis for water quality-based effluent limitations in permits. In addition to wasteload allocations for point sources, TMDLs include load allocations ("LAs") for background

and nonpoint sources, a margin of safety, and possibly a reserve allocation (for example, for future growth). CWA § 303(d)(1)(C); *see also* 40 CFR § 130.7; Office of Water, U.S. EPA, Doc. No. EPA-833-K-10-001, *NPDES Permit Writers' Manual* §§ 6.2.1.2, 6.4.1.1, at 6-14, -31 (Sept. 2010) ("*2010 Permit Writers' Manual*").

Although EPA initially approached the development of TMDLs one water segment at a time, EPA has long supported and encouraged states to develop TMDLs on a watershed-wide basis to more comprehensively assess and allocate pollutant loads across hydrologically-linked water segments at the same time. *See* Office of Wetlands, Oceans & Watersheds, U.S. EPA, *Handbook for Developing Watershed TMDLs* 1, 6-8 (draft Dec. 15, 2008) ("*Watershed TMDL Handbook*"); *see also* CWA § 303(d)(1); 40 CFR §§ 130.7, 131.3(h). Watershed TMDLs follow the same general process as a "single-segment TMDL," but the watershed TMDL involves larger-scale considerations and "often provides greater flexibility in developing source allocations." *Watershed TMDL Handbook* at 69. This approach is reflected in the LIS TMDL.

Antidegradation

The Clean Water Act specifically protects "existing" and "designated" uses of navigable waters. *PUD No. 1 of Jefferson Cty. v. Washington Dep't of Ecology,* 511 U.S. 700, 704–05, 114 S.Ct. 1900, 128 L.Ed.2d 716 (1994) (citing CWA § 303(c)(2)(A) & (d)(4)(B); 40 C.F.R. § 131.12). Thus, a state's water quality standards must identify existing and designated uses, such as drinking, recreation, wildlife support, and shellfish cultivation, and must establish "'water quality criteria for such waters based upon such uses.'" *Id.* at 704, 114 S.Ct. 1900 (quoting CWA § 303(c)(2)(A)). Further, pursuant to the Clean Water Act's "antidegradation policy," a state's water quality standards must "be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation." *Id.* at 705, 114 S.Ct. 1900 (citing CWA § 303(d)(4)(B)). The mandate's broad reach is reflected in 40 C.F.R. § 131.12(a)(2), which provides that states "shall assure water quality adequate to protect existing uses fully." Thus, no activity that would "'partially or completely eliminate any existing use'" is permitted, even if it would leave the majority of a given body of water undisturbed. *PUD No. 1,* 511 U.S. at 718–19, 114 S.Ct. 1900 (quoting EPA, Questions and Answers on Antidegradation at 3 (Aug.1985)). *Cf.* Water Quality Standards Regulation, 47 Fed. Reg. 49234 (Oct. 29, 1982); Water Quality Standards Regulation, 48 Fed. Reg. 51400 (Nov. 8, 1983). *See generally*, U.S. Environmental Protection Agency. 2017. Water Quality Standards Handbook: Chapter 4. EPA-823-B-17-001. EPA Office of Water, Office of Science and Technology, Washington, D.C.

The Relationship Between NPDES Permitting and TMDLs

This permit concerns the interrelationship between two key mechanisms prescribed by the CWA for protecting and improving water quality: (1) the facility-specific effluent limits established by NPDES permits issued pursuant to section 402, and (2) the TMDL WLAs, and the assumptions underlying them, developed by states pursuant to section 303(d) to limit and allocate pollution loads among facilities discharging to impaired water bodies. The statute does not specify how NPDES permits should incorporate or reflect WLAs. EPA's implementing regulations, however, require permitting authorities to ensure that permit effluent limits are "*consistent with the assumptions and*

requirements of any available [WLA] for the discharge prepared by the State and approved by EPA." 40 CFR § 122.44(d)(1)(vii)(B) (emphasis added).

As detailed below, EPA is obligated to regulate discharges that have the reasonable potential to cause or contribute to water quality standards violations through the imposition of WQBELs in NPDES permits, even where a TMDL has not yet been issued or updated. In so regulating, EPA may also impose limitations that are at once consistent as well as more stringent than the *assumptions* of a wasteload allocation in a TMDL based on new information. Finally, a permitting authority may derive a limit based on both a TMDL and the relevant water quality standard.

It has long been settled in the EAB and the First Circuit that EPA has the discretion to regulate discharge through the imposition of a WQBEL where a TMDL has not yet been issued or revised. As the Board explained in *In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 604-06 (EAB 2010):

> Regulations implementing the NPDES permitting program specifically contemplate that permit issuers will establish numeric permit limits when there is no TMDL or wasteload allocation. Subsection (vii) requires the permitting authority to "ensure" that effluent limits are consistent with "any *available* wasteload allocation." 40 CFR § 122.44(d)(1)(vii) (emphasis added). By using the phrase "any available," the regulations expressly recognize that a TMDL or wasteload allocation may not be available. This reading of the regulation is compelled by the Agency's interpretation set forth in the preamble to 40 CFR § 122.44(d)(1), which expressly outlines the relationship between subsections (vi) governing the setting of limits based on narrative criteria and (vii), which requires consistency with "any available" waste load allocation or TMDL:
>
>> The final point about paragraph (vi) is that, *in the majority of cases where paragraph (vi) applies, waste load allocations and total maximum daily loads will not be available* for the pollutant of concern. Nonetheless, any effluent limit derived under paragraph (vi) must satisfy the requirements of paragraph (vii). Paragraph (vii) requires that all water quality-based effluent limitations comply with "appropriate water quality standards," and be consistent with "available" waste load allocations. *Thus for the purposes of complying with paragraph (vii), where a wasteload allocation is unavailable, effluent limits derived under paragraph (vi) must comply with narrative water quality criteria and other applicable water quality standards.*
>
> 54 Fed. Reg. 23,868, 23,878 (June 2, 1989) (emphases added). This formal Agency interpretation set forth in the preamble at the time the regulation was promulgated expresses the Agency's expectation that, while wasteload allocations may not uniformly be available, effluent limits must be established without waiting for a TMDL or wasteload allocation.

The Board's decision was upheld in *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 26 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013), where the court similarly rejected the notion that permit issuers must wait until a TMDL or wasteload allocation is developed before setting an effluent limit in a permit and reiterated that scientific uncertainty is not a basis for delay in issuing an NPDES permit. *Accord In re City of Ruidoso Downs,* 17 E.A.D. 697, 733 (EAB 2019),

appeal docketed sub nom. Rio Hondo Land & Cattle Co. v. EPA, No. 19-9531 (10th Cir. May 23, 2019); *In re City of Taunton,* 17 E.A.D. 105, 144 (EAB 2016) *aff'd*, 895 F.3d 120 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 120 (Feb. 19, 2019).

Permit limits need not be identical to the wasteload allocation established by the TMDL. *See In re City of Homedale Wastewater Treatment Plant*, 16 E.A.D. 421, 432 (EAB 2014) (upholding as "consistent with the assumptions and requirements of the…TMDL" permitting authority's decision to include monthly and weekly average effluent limits for phosphorus, rather than daily maximum contained in applicable TMDL). Significantly, WLAs are not permit limits *per se*; rather they still require translation into permit limits (*i.e.*, WQBELs). EPA has the discretion to deviate from a wasteload allocation in a TMDL, if such a departure is warranted by the record and in accordance with paragraph 122.44(d)(1)(vii)(A). While section 122.44(d)(1)(vii) prescribes minimum requirements for developing WQBELs, it does not prescribe detailed procedures for their development. Rather, permit issuers have flexibility to determine appropriate effluent limits for permits within the parameters of the statutory and regulatory scheme. *See* 54 Fed. Reg. 23,868, 23,879 (June 2, 1989) (clarifying in preamble to 40 CFR § 122.44 that, in not imposing detailed procedures for establishing permit limits, EPA intended to "give[] the permitting authority the flexibility to determine the appropriate procedures for developing water quality-based effluent limits"). Accordingly, the Board has rejected the argument that the EPA permit writer, in calculating permit limits for a wastewater treatment plant, erred by using a facility's current, known design flow in developing effluent limits, rather than higher flow rate referenced in the TMDL. *In re City of Moscow*, 10 E.A.D. 135, 146-48 (EAB 2001). *See also City of Taunton v. EPA*, 895 F.3d 120, 139-40 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (2019) (upholding Agency's decision to establish necessary permit limits to comply with water quality standards based on available information at the time of permit reissuance (citing *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 26 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2832 (2013).

Additionally, neither the CWA nor its implementing regulations provide a basis for concluding that a permitting authority cannot derive a limit based on *both* a TMDL *and* the relevant water quality standard if there is a record justification to warrant that approach. *In re City of Ruidoso Downs,* 17 E.A.D. 697, 733 (EAB 2019), *appeal docketed sub nom. Rio Hondo Land & Cattle Co. v. EPA*, No. 19-9531 (10th Cir. May 23, 2019); *see also* NPDES Surface Water Toxics Control Program, 54 Fed. Reg. 23,868, 23,879 (June 2, 1989) (incorporating language into the regulations that requires water quality-based effluent limits to be derived from water quality standards because that "is the only reliable method for developing water quality-based effluent limits that protect aquatic life and human health"). To be sure, Sections 301 and 303 have different purposes; each represents a distinct aspect of the CWA statutory scheme that is implemented under a separate set of regulatory authorities. *Compare* 40 CFR § 122.44 (containing NPDES permitting regulations) *with* 40 CFR § 130.7 (containing CWA section 303(d) and TMDL regulations). *See In re City of Taunton Dep't of Pub. Works*, 17 E.A.D. 105, 142-144 (EAB 2016), aff'd, 895 F.3d 120, 136 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (Feb. 19, 2019) (explaining distinction between CWA § 303(d) listing process and the NPDES permitting process, and observing that, "The 303(d) listing process represents a statutory *response* to water pollution" while "NPDES permitting under CWA section 301 applies to individual discharges and represents a more *preventative* component of the regulatory scheme in that, under section 301, no discharge is allowed except in accordance with a permit.") (emphasis in original).

But critically, TMDLs, wasteload allocations developed from TMDLs, and water quality-based effluent limits in permits do share a common foundation in that all are required to take into account and assure that relevant water quality standards will be met. This conclusion is reflected in the applicable NPDES regulation at 40 CFR § 122.44(d)(1)(vii)(A)-(B):

> (vii) When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that:
>
> > (A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; *and* [emphasis added]
> >
> > (B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.

These two provisions are not to be read in isolation; rather, as indicated by the word "and," these requirements must be read in conjunction with one another. "TMDLs are by definition maximum limits; permit-specific limits…which are more conservative than the TMDL maxima, are not inconsistent with those maxima, or the WLA upon which they are based." *In re City of Moscow*, 10 E.A.D. 135, 148 (EAB 2001). This outcome is in in keeping with other provisions of the NPDES regulations implementing the NPDES program and CWA § 301, including 40 CFR § 122.4(a) ("No permit may be issued…[w]hen the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or promulgations promulgated under CWA'); § 122.44(d)(4) (requiring NPDES permits to include "any requirements in addition to or more stringent than promulgated effluent limitation guidelines or standards under sections 301…of the CWA necessary to…[c]onform to applicable water quality requirements under section 401(a)(2) of CWA when the discharge affects a State other than the certifying State") and 122.44(d)(5) (requiring NPDES to "Incorporate any more stringent limitations, treatment standards, or schedule of compliance requirements established under Federal or State Law or regulations in accordance with section 301(b)(1)(C) of the CWA"). *See also* NPDES Surface Water Toxics Control Program, 54 Fed. Reg. 23,868, 23,879 (June 2, 1989) (incorporating language into the regulations that requires water quality-based effluent limits to be derived from water quality standards because that "is the only reliable method for developing water quality-based effluent limits that protect aquatic life and human health"). *See City of Taunton v. EPA*, 895 F.3d 120, 139-40 (1st Cir. 2018) (upholding EPA's decision to establish necessary permit limits to comply with water quality standards based on available information (citing *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 26 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013)).

The Nutrient Limits Are Consistent with the Assumptions and Requirements of the LIS TMDL

It is undisputed that excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including low dissolved oxygen. In December 2000, the Connecticut Department of Environmental Protection ("CT DEP"), now known as the Connecticut Department of Energy and Environmental Protection ("CT DEEP"), and New York State Department of

Environmental Conservation ("NYSDEC"), completed a TMDL for addressing nitrogen-driven eutrophication impacts in Long Island Sound. The TMDL includes a WLA for point sources and a load allocation ("LA") for non-point sources. The point source WLAs for in-basin sources (Connecticut and New York State) are allocated facility-by facility and were developed to achieve an aggregate 60% reduction in point source loading from those two states. The point source WLA in the TMDL *assumes* an aggregate 25% reduction from the baseline total nitrogen loading estimated in the TMDL for out-of-basin sources (Massachusetts, New Hampshire and Vermont wastewater facilities discharging to the Connecticut, Housatonic and Thames River watersheds), but does not allocate loads by facility. *See* TMDL--A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound (CT DEP 2000, page 33).

Although the facility's discharge has not been assigned a specific WLA, it is still subject to the assumptions incorporated into the LIS TMDL under Section 303 of the Act, and implementing regulations, as well as compliance with applicable water quality standards under Section 301 and 401(a)(2) of the Act. The nitrogen load limit in the permit is necessary to meet federal regulations at 40 CFR § 122.44(d)(1)(vii)(A), which as explained require that effluent limits be consistent the assumptions and requirements of any available approved wasteload allocation, and 40 CFR § 122.44(d)(1)(vii)(B), which require compliance with state water quality standards. In its 2001 LIS TMDL approval letter and attached review memo, EPA acknowledged the TMDL assumption that a 25% reduction of the out-of-basin point source load was a reasonable, necessary condition for approving the LIS TMDL. It committed to use its NPDES authorities to implement this reduction. EPA discussed the out-of-basin nitrogen loads as follows:

> The TMDL identifies wasteload allocations for out-of-basin nitrogen loads (i.e., tributary loads) that would be achieved through the implementation of Phase IV reduction targets. Specifically, the Phase IV targets include a 25 percent reduction in point source nitrogen loads, based on the clear role that these sources have on water quality in Long Island Sound.
>
> As discussed above, EPA is not approving the out-of-basin nitrogen reductions as formal allocations but rather as reasonable assumptions on which the in-basin reductions are based. In this case, the states' estimated 25 percent reduction in nitrogen loads from point sources (primarily POTWs) is reasonable because this level of reduction has been demonstrated as feasible through Biological Nutrient Removal (BNR) retrofits of existing facilities. These low-cost retrofits were implemented at numerous Connecticut POTWs during Phase II of the Long Island Sound nitrogen reduction program. The reductions achieved by these retrofits support the predicted 25 percent reduction by out-of-basin sources. EPA believes that these estimates of future reductions make sense. Moreover, as discussed in the Reasonable Assurance section below, EPA is prepared to use its authorities when issuing NPDES permits to dischargers in Massachusetts and New Hampshire, and in overseeing permit issuance in Vermont, to translate the nitrogen reductions into facility specific requirements in order to achieve the overall 25 percent reduction level. EPA has already begun to include nitrogen monitoring requirements in Massachusetts permits.

Review Memo Section 5.B (page 13, emphasis added).[8] Therefore, EPA's approval of the 2000 TMDL included a commitment on EPA's part to use its NPDES permitting and oversight authorities to reasonably assure that the assumption regarding out-of-basin load reductions identified in the TMDL would occur, consistent with the regulatory requirements. In this and other documents, EPA refers to that commitment as the out-of-basin WLA, consistent with the language in the TMDL.

The annual loading effluent limit is consistent with the assumptions used to derive the WLA for both in-basin and out-of-basin dischargers in the LIS TMDL, because of permitting actions taken since the LIS TMDL was approved in 2001. Although there is uncertainty regarding the actual baseline out-of-basin load that existed in 2000, it is reasonable to assume that the combination of optimization requirements (already included in most out-of-basin permits issued over the last 10 years) and effluent limits (included in out-of-basin permits issued since 2019 for larger POTWs) assures that the aggregate out-of-basin non-stormwater point source load is less than the out-of-basin load in 2000. As TN increases may be driven by population increases (the estimated wastewater TN loading is 10 pounds per person per year[9]), TN effluent limits are necessary to assure that the aggregate out-of-basin loading is not exceeded due to population growth. EPA anticipates that forthcoming out-of-basin permits in Massachusetts will include average annual loading nitrogen limits for facilities with design flow greater than 1 MGD, along with TN optimization requirements in all permits for dischargers greater than 100,000 gpd, and monitoring for all dischargers, in order to assure that TN loadings will be not increase over time to levels that exceed the WLA assumption in the TMDL.

The Nutrient Limits are Imposed Based on a Finding of Reasonable Potential to Cause or Contribute to an Exceedance of Water Quality Standards; Constitute a Translation of the States' Narrative Nutrient Water Quality Standards; and Are Necessary to Ensure Compliance with Water Quality Standards, Including Antidegradation

Narrative standards have the same force and effect as other state water quality standards; unlike numeric criteria, however, narrative water quality standards are necessarily subject to translation prior to their application. *See American Paper Inst. v. United States EPA*, 996 F.2d 346, 351 (D.C. Cir. 1993). As explained by the D.C. Circuit:

> As long as narrative criteria are permissible…and must be enforced through limitations in particular permits, a permit writer will inevitably have some discretion in applying the criteria to a particular case. The general language of narrative criteria can only take the permit writer so far in her task. Of course, that does not mean that the language of a narrative criterion does not cabin the permit writer's authority at all; rather, it is an acknowledgement that the writer will have to engage in some kind of interpretation to determine what chemical-specific numeric criteria—and thus what effluent limitations—are most consistent with the state's intent as evinced in its generic standard.

[8] TMDL Approval Letter from the Long Island Sound Office of the U.S. EPA to the states of New York and Connecticut, with enclosure entitled: EPA New England and EPA Region 2 TMDL Review for TMDL in Long Island Sound, Connecticut and New York, Final Status, Impairment/Pollutant is Hypoxia (low dissolved oxygen) due to nitrogen, dated April 3, 2001.

[9] Unit loading from residences has been estimated at an average of 0.027 lb/capita/d or 10 lb/capita/year. See EPA Manual – Nitrogen Control, September 1993, EPA/625/R-93/010, Page 10.

See American Paper Inst., 996 F.2d at 351 (citations omitted). This process of translating a narrative criterion is governed under EPA regulations by 40 CFR § 122.44(d)(1)(vi), which implements Sections 301 and 402 of the Act. Subsection (A) of that provision mandates at the outset a calculation of a protective ambient threshold concentration for the pollutant:

> Where a State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits using one or more of the following options:
>
> > (A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use.

See also Upper Blackstone Water Pollution Abatement Dist. v. United States EPA, 690 F.3d at 23. Because both Connecticut and New York employ narrative water quality criteria for the relevant pollutants, EPA relied in the first instance on the TMDL (a sophisticated and resource-intensive modeling and technical effort representing the input of five states and EPA) as a translation of these criteria under 40 CFR § 122.44(d)(1)(vi), and supplemented that reliance with an analysis of subsequent water quality monitoring data and other information related to LIS nutrient-driven impairments.[10]

As the Board and First Circuit have held, EPA has a significant amount of flexibility within the bounds of the CWA in determining whether a particular discharge has a reasonable potential to cause an excursion above a water quality criterion. *In re City of Taunton Dep't of Pub. Works*, 17 E.A.D. 105, 144 (EAB 2016), aff'd, 895 F.3d 120, 136 (1st Cir. 2018), cert. denied, 139 S. Ct. 1240 (Feb. 19, 2019)*; Upper Blackstone Water Pollution Abatement Dist. v. U.S. Envtl. Prot. Agency*, 14 E.A.D. 577, aff'd, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382(2013); *In re Town of Newmarket*, 16 E.A.D. 18 (EAB 2013); *In re City of Attleboro Wastewater Treatment Plant*, 14 E.A.D. 398 (EAB 2009). The requirement to impose a permit limit is triggered by a finding that the facility may discharge a pollutant at a level that "contributes" to or has the "reasonable potential" to cause a water quality standard violation. *Upper Blackstone*, 14 E.A.D. at 599 & n.29; *see also* 40 CFR § 122.44(d). To establish a "reasonable potential" the permitting authority must show "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". *Upper Blackstone*, 14 E.A.D. at 599 n.29. Additionally, the reasonable potential analysis must be based on "worst-case" effluent conditions. *Id*. at 599. Thus, as explained previously, this analysis requires "a precautionary approach when determining whether the permit must contain a water quality-based effluent limit for a particular pollutant," rather than "certainty of an existing causal link between a specific discharge

[10] NY and CT have narrative nutrient criteria, as well as numeric DO criteria, along with antidegradation requirements protecting existing uses. LIS was listed due to low DO. The use impairment includes: decrease in bathing area quality, an increase in unhealthy areas for aquatic marine life, an increase in mortality of sensitive organisms, poor water clarity for scuba divers, a reduction in commercial and sport fisheries values, a reduction in wildlife habitat value, degradation of seagrass beds, impacts on tourism and real estate, and poorer aesthetics. See TMDL at p. 9.

and a particular violation of water quality standards" *Id*. Consistent with this overall approach, EPA analyzes available record materials from a reasonably conservative standpoint when evaluating whether nutrients in a discharge have the reasonable potential to cause or to contribute to a water quality standards violation, and when establishing necessary WQBELs. This protective approach is appropriate because, once begun, the cycle of eutrophication can be difficult to reverse due to the tendency of nutrients to be retained in sediment and from there reintroduced into the water body. In addition, in flowing systems, nutrients may be rapidly transported downstream and the effects of nutrient inputs may be uncoupled from the nutrient source, which complicates source control. Thus, a key function of a nutrient limit is to protect downstream receiving waters regardless of their proximity in linear distance.

Although nitrogen driven impairments in LIS have been reduced, they have not been eliminated, and remain significant. In EPA's technical and scientific judgment, the current quantity of nitrogen in LIS exceeds the narrative and numeric nutrient-related criteria applicable to LIS, and existing uses are not being protected, based on analyses of water quality data and information in the administrative record.[11] The out-of-basin loads, whose magnitude is described above, necessarily contribute, or have the reasonable potential to contribute, to these violations. Designated uses for the marine waters of Long Island Sound (Class SA) include "habitat for marine fish, other aquatic life and wildlife." *See* RCSA § 22a-426-(f) and (g). Connecticut's WQS protect those uses from excessive nutrient pollution by means of the following narrative criteria: "The loading of nutrients, principally phosphorus and nitrogen, to any surface water body shall not exceed that which supports maintenance or attainment of designated uses." Although there have been significant reductions in the size of the hypoxic zone in LIS due largely to in-basin point source TN reductions, LIS continues to be impaired.[12] As noted, it is undisputed that significant amounts of nitrogen from out-of-basin facilities are discharged to the LIS watershed (as much as 6 million pounds per year, based on the sum of the maximum annual discharge from each out-of-basin discharger from 2013 to 2017).

Since the LIS TMDL was approved by EPA in 2001, the study of water quality conditions in LIS and the nitrogen loadings that contribute to hypoxia and other impairments there has continued. Annual monitoring of hypoxia and dissolved oxygen conditions in Long Island continues, as most recently documented in the *2019 Long Island Sound Hypoxia Season Review*[13] which notes that while the area of hypoxia has been reduced, water quality standards have not yet been met.[14]

In 2015, the Long Island Sound Study (LISS)[15] updated its Long Island Sound Comprehensive Conservation and Management Plan (CCMP)[16] which sets watershed targets, implementation actions to meet those targets, and monitoring strategies. One of the objectives of the CCMP is to improve

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[11] *See* e.g. Long Island Sound Report Card 2018, at https://www.ctenvironment.org/wp content/uploads/2018/09/ReportCard2018-BestView.pdf

[12] Long Island Sound Study, *A Healthier Long Island Sound: Nitrogen Pollution*, 2019, page 2.

[13] CTDEEP, Interstate Environmental Commission, EPA, *2019 Long Island Sound Hypoxia Season Review*, available at: http://www.iec-nynjct.org/sites/default/files/2020-07/FINAL_LISound-Hypoxia-2019-Combined-Report_april2020.pdf

[14] *2019 Long Island Sound Hypoxia Season Review* (page 13)

[15] The Long Island Sound Study (LISS) is a bi-state partnership, formed by EPA, New York and Connecticut in 1985, consisting of federal and state agencies, user groups, concerned organizations, and individuals dedicated to restoring and protecting the Long Island Sound. For more information see https://longislandsoundstudy.net/

[16] LISS, Long Island Sound Comprehensive Conservation and Management Plan 2015 Returning the Urban Sea to Abundance (CCMP), 2015.

water quality by further reducing nitrogen pollution from sources that are more distant from the Sound,[17] such as wastewater treatment plants in Massachusetts.

A study published in 2008 used both measurements and mass-balance modeling to evaluate the potential for nitrogen attenuation in the main stem of the Connecticut River in April and August 2005. One of the reaches studied was a 55 km stretch of the Connecticut River in Massachusetts. The study found no nitrogen loss in that reach either in April or August, most likely due to the depth and higher velocities in the main stem of the river compared to the shallower, slower tributaries where previous models and studies had demonstrated varying degrees of nitrogen attenuation.[18]

In addition, subsequent studies refined the understanding of out-of-basin baseline nitrogen loading which suggest lower out-of-basin baseline point source loading to the Connecticut River than the 21,672 lb/day assumed in the 2000 TMDL. In 2013, the United States Geological Survey (USGS) published an estimation of the total nitrogen load to Long Island Sound from Connecticut and contributing areas to the north for October 1998 to September 2009.[19] Available total nitrogen and continuous flow data from 37 water-quality monitoring stations in the LIS watershed, for some or all of these years, were used to compute total annual nitrogen yields and loads. In order to extract the non-point source loadings from the total nitrogen measured, the authors relied on point source estimates from the SPARROW model of nutrient delivery to waters in the Northeastern and Mid-Atlantic states in 2002, including the Connecticut River, that was published by Moore and others in 2011[20]. The SPARROW model estimated that 1,776.7 metric tons per year (MT/yr) (or annual average 10,820 lb/day) of total nitrogen was discharged to the Connecticut River from Massachusetts, New Hampshire and Vermont in 2002[21]. These estimates were based on an approach by Maupin and Ivahnenko, published the same year, which used discharge monitoring data available from EPA's Permit Compliance System (PCS) database for 2002.[22,23] Where no data was available, an estimated typical pollutant concentration (TPC) and flow was used to approximate nitrogen loading from point sources according to their industrial category.[24]

Long Island Sound continues to be listed as impaired on Connecticut's latest EPA-approved list of impaired waters and is experiencing ongoing effects of eutrophication, including low DO, although the system has experienced improvements since the TMDL was approved. EPA acknowledges the complexity of the system and the receiving water response, and EPA recognizes that work that is

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[17] CCMP, page 19.

[18] Smith, Thor E., et al, *Nitrogen Attenuation in the Connecticut River, Northeastern USA; A Comparison of Mass Balance and N_2 Production Modeling Approaches, Biogeochemistry*, Mar., 2008, Vol. 87, No. 3 (Mar., 2008), pp. 311-323

[19] Mullaney, J.R., and Schwarz, G.E., 2013, Estimated Nitrogen Loads from Selected Tributaries in Connecticut Draining to Long Island Sound, 1999–2009: U.S. Geological Survey Scientific Investigations Report 2013–5171, 65

[20] Moore, Richard B., Craig M. Johnston, Richard A. Smith, and Bryan Milstead, 2011. Source and Delivery of Nutrients to Receiving Waters in the Northeastern and Mid-Atlantic Regions of the United States. Journal of the American Water Resources Association (JAWRA) 47(5):965-990. DOI: 10.1111/j.1752-1688.2011.00582.x

[21] Extrapolated from Moore, et.al 2011, Table 3 on page 977 which estimated that for 2002 an 33.2 % of the total 4,553 MT/yr Massachusetts nitrogen load was from point sources, 2.5% of the total 3,795 MT/yr Vermont nitrogen load was from point sources and 6.1 percent of the total 2,790 MT/yr New Hampshire nitrogen load was from point sources.

[22] Moore (2011), page 968.

[23] Maupin, Molly A. and Tamara Ivahnenko, 2011. Nutrient Loadings to Streams of the Continental United States From Municipal and Industrial Effluent. *Journal of the American Water Resources Association* (JAWRA) 47(5):950-964.

[24] Maupin (2011), page 954.

currently ongoing with regards to additional water quality modeling, point source load reductions and WWTP upgrades in other states, particularly New York and Connecticut. In order to ensure that water quality standards are met, EPA has determined that at most TN should be no greater than that resulting from nitrogen currently being discharged from all sources. Holding the load from out-of-basin sources, along with reductions resulting from the nitrogen optimization special condition, combined with other ongoing work to further reduce in-basin loadings, are in EPA's judgment together sufficient to assure that the discharge is in compliance with standards. Accordingly, a more stringent limit is not warranted at this time. EPA will over the course of the permit term evaluate monitoring results from LIS and, if necessary, it will adjust requirements upon permit renewal.

The permit conditions at issue here were fashioned to ensure full implementation of CWA §§ 301(b)(1)(C), 401(a)(2) and 402, as well as consistency with the assumptions of the LIS WLA. A permitting authority has considerable discretion to determine appropriate effluent limits for a permit. "Congress has vested in the Administrator [of EPA] broad discretion to establish conditions for NPDES permits" in order to achieve these statutory mandates of establishing effluent limitations, including narrative permit conditions, to attain and maintain water quality standards. *Arkansas v. Oklahoma*, 503 U.S. 91, 105 (1992). Section 402 provides that a permit may be issued upon condition "that such discharge will meet either all applicable requirements under sections 301, 302, 306, 307, 308 and 403 of this Act, or prior to taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this Act." 33 U.S.C. §1342(a). "This provision gives EPA considerable flexibility in framing the permit to achieve a desired reduction in pollutant discharges." *Id.* The D.C. Circuit has described the CWA's balance when confronted with a difficult situation and the obligation to eliminate water quality impairments: "EPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels. This may well mean opting for a gross reduction in pollutant discharge rather than the fine-tuning suggested by numerical limitations. *But this ambitious statute is not hospitable to the concept that the appropriate response to a difficult pollution problem is not to try at all.*" *Natural Resources Defense Council, Inc. v. Costle,* 568 F.2d 1369, 1380 (D.C. Cir. 1977) (emphasis added) (finding unlawful a rule that would have exempted certain discharges from permitting requirements based on the difficulty in setting limits). EPA's decision to cap the out-of-basin TN loads in the aggregate was consistent with this gross approach to pollutant control, which is appropriate here given the need to ensure reasonable further progress toward restoration of uses in LIS based on reductions that have already occurred and whose impact is still being realized. It is also appropriate in light of the fact that more sophisticated models to precisely define the exact level of pollutant controls need are not available. EPA has explained that when permitting for nutrients, time is of the essence, because of the tendency of nutrients to recycle in the ecosystem and exacerbate existing impairments, as outlined in EPA's Nutrient Technical Guidance Manual. Rather than wait for the development of that information, a daunting task because of the size and complexity of LIS and vast areal extent of loading, EPA determined that it would be reasonable to move forward. This decision is also reasonable because Springfield and many other contributing sources' permits are long expired.

Finally, antidegradation provisions of State water quality standards require that existing uses be fully maintained and protected, which is an additional basis for the limit. Authorizing a significantly increased nitrogen loading into an impaired water body that is suffering the ongoing effects of cultural eutrophication would be inconsistent with applicable antidegradation requirements. One of

the principal objectives of the CWA, articulated in CWA § 101(a) is to "maintain the chemical, physical and biological integrity of the Nation's waters." The antidegradation requirements in federal regulations at 40 CFR § 131.12 provide a framework for maintaining and protecting water quality that has already been achieved and require states to adopt provisions in their water quality standards that prevent further degradation of both degraded waters and waters which are meeting or exceeding the water quality necessary to protect designated and existing uses.

Since the receiving water at issue here is in Connecticut, EPA looks to Connecticut Water Quality Standards. These standards provide that, "It is the state's goal to restore or maintain the chemical, physical and biological integrity of surface waters. Where attainable, the level of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water shall be achieved." R.C.S.A. § 22a-426-4(a)(1). "Surface waters and sediments shall be free from chemical constituents in concentrations or combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms or otherwise impair the biological integrity of aquatic or marine ecosystems…" *Id*. at 22a-426-4(a)(5). "The Commissioner shall require Best Management Practices, including the imposition of discharge limitations or other reasonable controls on a case-by-case basis as necessary for point and nonpoint sources of phosphorus and nitrogen, including sources of atmospheric deposition, which have the potential to contribute to the impairment of any surface water, to ensure maintenance and attainment of existing and designated uses, restore impaired waters, and prevent excessive anthropogenic inputs of nutrients or impairment of downstream waters." *Id*. at 22a-426-4(a)(11).

The classification for the receiving waters at issue and affected by the Springfield discharge in this case are Class SA and Class SB. The designated uses for Class SA waters are: (1) habitat for marine fish, other aquatic life and wildlife; (2) shellfish harvesting for direct human consumption; (3) recreation; (4) industrial water supply; and (5) navigation. R.C.S.A. § 22a-426-4(f). The designated uses for Class SB waters are: (1) habitat for marine fish, other aquatic life and wildlife; (2) commercial shellfish harvesting; (3) recreation; (4) industrial water supply; and (5) navigation. *Id*. § 22a-426-4(j). The criteria applicable to these waters are listed at § 22a-426-9(a)(1). These class specific criteria set out requirements for Dissolved Oxygen, nutrients and biological condition.

Under Connecticut's antidegradation standards, "Existing and designated uses such as propagation of fish, shellfish and wildlife, recreation, public water supply, and agriculture, industrial use and navigation, and the water quality necessary for their protection are to be maintained and protected." R.C.S.A. § 22a-426-8(a)(1). The standards further provide, "The procedures for review outlined in this policy apply to any discharge or activity that is affecting or may affect water quality in Connecticut, including but not limited to any existing, new or increased activity or discharge requiring a permit, water quality certificate or authorization pursuant to chapters 439, 440, 445 or 446i to 446k, inclusive of the Connecticut General Statutes." Tier 1 Antidegradation Review is applicable to all discharges, irrespective of whether it is new or increased within the meaning of § 22a-426-8(b)(2). Under that tier of review,

> "The Commissioner shall determine whether the discharge or activity is consistent with the maintenance, restoration, and protection of existing and designated uses assigned to the receiving water body by considering all relevant available data and the best professional judgment of department staff. All narrative and numeric water quality standards, criteria and

associated policies contained in the Connecticut Water Quality Standards shall form the basis for such evaluation considering the discharge or activity both independently and in the context of other discharges and activities in the affected water body and considering any impairment listed pursuant to 33 USC 1313(d) or any Total Maximum Daily Load (TMDL) established for the water body."

As the Massachusetts point source dischargers are substantially upstream of the impaired receiving waters and EPA is applying the antidegradation requirement by capping the aggregate loading of nitrogen to Long Island Sound from Massachusetts dischargers, an increased discharge of nitrogen beyond current loads into nitrogen-degraded waters experiencing the effects of cultural eutrophication (e.g., DO impairments) under the circumstances here would not be consistent with the Act. Holding the load from these facilities will maintain and protect existing uses, which are identified in more detail in the comments and responses below. This allows EPA to ensure that the nitrogen limits are applied fairly and in a technologically feasible manner while ensuring that antidegradation provisions of Connecticut's water quality standards are being met.

Pursuant to ensuring that the out-of-basin point-source load does not violate Connecticut's antidegradation standards, the new total nitrogen loading limits (for dischargers with design flows greater than 1 MGD) along with the requirement to minimize nitrogen discharge by facility optimization (for all dischargers with design flow greater than 0.1 MGD) are intended to ensure that nitrogen loads are held at current loadings. As can be seen from the summary in Table 1, 92 % of this load is from POTWs with design flow > 1 MGD. The impact of the new TN effluent limits will be to cap that load at approximately the same average loading. Table 1 summarizes the five-year average out-of-basin loads generated by Massachusetts non-stormwater point sources, based on data provided in Appendix A. While the sum of effluent limited loads for POTWS with design flow greater than 1 MGD is somewhat higher than the average loads observed in recent years, actual effluent limited loads can be expected be lower than the limits in order to avoid permit violations. EPA will continue to track out-of-basin loads as new data becomes available as well as developments in EPA's Long Island Sound Nitrogen Reduction Strategy (see the 2017 Fact Sheet, page 21) and will re-evaluate permit requirements for nitrogen for all out-of-basin dischargers in future permit actions.

Table 1 - Summary of **Massachusetts** Out-of-Basin Non-Stormwater Point Source Loads

	Sum of Average Loads 2013-2017 (lb/day)	Sum of Average Load 2014-2018 (lb/day)	Sum of Effluent Limited Loads (lb/day)
POTWs with design Flow > 1 MGD	10,023 (92%)	9,865 (92%)	10,907
POTWs with design Flow 0.1 to 1 MGD	869 (8%)	859 (8%)	
POTWs with design Flow < 0.1 MGD and Industrial Sources.	19 (0.02%)	20 (0.02%)	
TOTAL	10,911 (Range 9,767 to 11,528)	10,744 (Range 9,767 to 11,528)	

In order to assure compliance with water quality standards, and fully implement and translate the states' narrative nutrient and related criteria, out-of-basin loads in EPA's judgment should not be increased, because water quality data indicates that the assimilative capacity for nitrogen has been reached in portions of LIS and cultural eutrophication, the impacts of which include hypoxia, is ongoing. It is reasonable, in EPA's view, to issue permits to out-of-basin dischargers that hold loads constant and in so doing curtail the potential for these out-of-basin loadings to contribute to further impairment and degradation of a water that is already beyond its assimilative capacity for nitrogen. The TN effluent limits and optimization requirements are necessary to assure that the out-of-basin load does not cause or contribute to further violation of water quality criteria in the downstream LIS. Holding these loads level, in conjunction with significant nitrogen pollution reduction efforts being pursued by in-basin dischargers will, under EPA's analysis, be sufficient to make a finding that the out-of-basin permits taken as a whole contain nutrient controls sufficient to ensure that the discharges comply with water quality standards under Section 301 of the Act, based on information in the record currently before EPA. This conclusion will be tested for the term of the permit through the extensive monitoring programs in LIS and will be adjusted as necessary in future permit cycles. This review and potential tightening of the conditions in NPDES permits is a basic feature of the CWA.

IV. Principal Objections to EPA's Chosen Out-of-Basin Permitting Approach

Overall, commenters objecting to the approach adopted by EPA misapprehend the legal framework governing EPA's derivation of NPDES effluent limitations under CWA § 402, which under federal regulations must not only be consistent with the assumptions and requirements of any available WLA, but also must ensure compliance with applicable water quality standards pursuant to CWA § 301, based on information reasonably available to EPA at the time of permit reissuance.

Effluent limits may be more stringent than a TMDL WLA

Several commenters argue that compliance with the nitrogen reductions assumed by the LIS TMDL preclude the imposition of further nitrogen controls on the facility, or rely on the closely-related proposition that EPA must await the development and approval of new, facility-specific WLAs for the out-of-basin POTWs prior to imposing effluent limitations, even if there is evidence of ongoing water quality impairments in the receiving waters (a fact not disputed on the permit record). These positions, however, are unfounded, as the Environmental Appeals Board and United States Court of Appeals for the First Circuit have repeatedly and unambiguously held that EPA need *not* await development of an EPA-approved, facility-specific WLA, or collection of new water quality data or creation of new models, in order to independently develop and impose a water quality-based effluent limitation stringent enough to satisfy CWA § 301 at the time of permit reissuance. *See City of Taunton v. U.S. Envtl. Prot. Agency,* 895 F.3d 120 (1st Cir. 2018), *cert. denied*, 139 S. Ct. 1240 (2019); *Upper Blackstone Water Pollution Abatement Dist. v. U.S. Envtl. Prot. Agency*, 690 F.3d 9 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (2013).

Additionally, some commenters appear to misconstrue the basis for the permit limits for the out-of-basin dischargers, improperly characterizing that foundation as the WLA established for POTWs discharging directly into Long Island Sound. By this, they imply that the permit need only comply

with the WLA, as opposed to the Act as a whole. This view is incorrect in at least two ways. First, as a factual matter, the out-of-basin dischargers were not assigned a WLA; reductions from these sources were an *assumption* of the LIS WLA. Second, EPA's permit limits were not only developed to be consistent with the LIS WLA, but also derived from water quality standards under CWA § 303, which may lead to the imposition of more stringent effluent limitations necessary to achieve those standards, as EPA is obligated to do under CWA § 301. Thus, in accordance with the Act and EPA's implementing regulations, they have been: (1) written to be "consistent" with the assumptions and requirements of the LIS WLA, which was established based on an assumption that out-of-basin sources of nitrogen would be reduced by 25%, and (2) made more stringent than that assumption in order to comply with CWA § 301, based on information available to EPA at the time of permit reissuance, specifically, evidence of ongoing nitrogen-driven impairments in LIS.

EPA need not await a TMDL update before it can incorporate new information relevant to nitrogen loading and receiving water quality in an NPDES permit, and consideration of new information does not amount to a de facto TMDL update

Some commenters argued that EPA must await development of a new TMDL prior to considering updated information when developing NPDES permits. This view improperly subordinates the NPDES program to the TMDL program. In fact, they are coordinate programs. TMDLs establish pollutant maxima under Section 303 of the Act, and do not preclude the imposition of a more stringent limit pursuant to an NPDES permit under Section 402. While NPDES permits must be consistent with the assumptions and requirements of any available WLA pursuant to EPA regulations, EPA has an independent obligation to write NPDES permits that ensure compliance with Section 301, using the best information available at the time of permit reissuance, which in this case includes an evaluation of TMDL implementation and current receiving water quality in LIS. While the TMDL represented, as a commenter notes, "the best scientific and legal approach for meeting water quality standards in the LIS" at the time, EPA may supplement its scientific and technical record for the purposes of NPDES permitting, including through refining its knowledge of TMDL inputs and assumptions, such as baseline loads, which are inherently dynamic and vary from permit cycle to cycle, as well as an evaluation of instream monitoring and data that reflect the extent to which the TMDL endpoints are being achieved. Contrary to some commenters' assertions, EPA is not attempting to modify the TMDL through issuance of a permit; EPA, rather, is implementing the TMDL by issuing a permit consistent with the assumptions and requirements of that TMDL as required by the federal regulations, and pursuant to its independent obligations under Sections 301 and 402 of the Act. *See* 40 CFR 122.44(d)(1)(vii)(A)-(B).

TMDLs are in a sense fixed in a moment in time, but that attribute of TMDLs does not suspend consideration of new information or preclude new analysis consistent with the TMDL under other regulatory programs, such as the NPDES permit program, *if the permit record calls for such an evaluation*. This stands to reason, given that a person is authorized to discharge, if at all, through an NPDES permit, not a TMDL, and the issuance of an NPDES permit that does not assure attainment of water quality standards is prohibited under the Act and regulations implementing the NPDES program. EPA is obligated under the Act to revisit NPDES permit requirements and generate updated record bases for decision at periodic intervals not to exceed five years. TMDLs, on the other hand, are planning documents and not independently enforceable. Rather, they are implemented though the regular issuance of NPDES permits, and at each NPDES permit reissuance, the permit

issuer *must* demonstrate that the discharge will not cause or contribute to a water quality standards violation. Reassessing the baseline load, which was derived from estimated point source loads from over 30 years ago, is one component of this process. This evaluation is a function of the NPDES permitting process and does not amount to an "update" of the TMDL. EPA is obligated to ensure not only that the NPDES WQBELs are consistent with the assumptions and requirements of any available WLA, but to ensure that the permit complies with the requirements of Section 301. Given the lapse of time between TMDL approval, and derivation of the baseline assumptions underlying the TMDL, and given the fact that the in-basin WLAs have been achieved but impairments are still ongoing, this type of inquiry is reasonable, and indeed has been squarely requested of EPA through comments on the record, including but not limited to those from a downstream affected state. (Even commenters objecting to this reassessment recognize that the NPDES permits necessarily incorporate more recent data and information, given the structure of Section 301 and 402; in objecting to a proposed benchmark, the commenter states, "It does not represent the most recent data available to the Agency at the time of permit renewal.")

The optimization requirement is not vague and is within EPA's authority

Some commenters argued that that a special condition, such as the optimization requirement, is not anticipated by rule, guidance or definition. EPA is authorized to impose narrative conditions in permits to abate the discharge of pollutants when, for example, "The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA." 40 CFR § 122.44(k)(4). In this case, optimizing for the removal of nutrients will protect all uses in an already impaired water body by reasonably minimizing the amount of nitrogen load to the LIS. This condition, combined with the hold the load numeric TN requirements, provides further assurance under Section 301 and 401(a)(2) that water quality standards will be met. Special conditions are defined in EPA's NPDES Permit Writer's Manual as those which,

> "supplement numeric effluent limitations and require the permittee to undertake activities designed to reduce the overall quantity of pollutants being discharged to waters of the United States, to reduce the potential for discharges of pollutants, or to collect information that could be used in determining future permit requirements." (*NPDES Permit Writers' Manual, Chapter 9,* USEPA September 2010 [EPA833-K-10-001], page 9-1).

As the optimization requirement supplements the TN annual average load limit and is designed to reduce the overall quantity of nitrogen being discharged, it clearly fits within this definition. The requirement is not overly prescriptive, because it is intended to afford the Permittee with the latitude to develop the optimization strategy that best meets the configuration and operation of the facility. EPA in imposing the optimization requirement is not dictating specific operational measures at the facility.

EPA disagrees that the optimization is vague. Optimization has been defined, for example, as the process of identifying the most efficient or highest quality outcome, given current constraints, by maximizing positive factors and minimizing negative factors. A permittee applying this or other definition in common usage would not be at risk of arbitrary enforcement. Rather, this condition gives a person of ordinary intelligence a reasonable opportunity to know what is prohibited and comply with the requirement by considering objective factors, so that they may act accordingly. The operators of the facility, as evidenced in their comments, have a deep and nuanced expertise in

nutrient removal capabilities and constraints of the plant, and of the factors that impact plant performance.

It is intended that during the first year of the permit, alternative methods of operating the facility to optimize nitrogen removal will be evaluated. At the end of the year, the Permittee will submit a report to the EPA and MassDEP of its findings. The optimal operational method will be self-implementing by the Permittee at the beginning of the second year and does not require EPA or MassDEP approval. It is the intent of EPA and MassDEP that treatment facilities optimize nitrogen removal and, at a minimum, the facilities must not increase their nitrogen discharge loadings.

Voluntary reductions in Total Nitrogen discharge will not assure attainment of water quality standards

Certain commenters suggest that *voluntary* reductions by the out-of-basin dischargers are sufficient to ensure compliance with applicable water quality standards under Section 301 of the Act. The Region disagrees. One long-standing principle is that permits must "ensure" compliance with water quality requirements. *See* 40 CFR § 122.4(d); *In re City of Marlborough*, 12 E.A.D. 235, 250 (EAB) (2005) (finding that "possible" compliance is not the same as "ensuring" compliance); *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323,342 (EAB 2002) (finding that "reasonably capable" does not comport with the "ensure" standard). EPA has similarly interpreted the CWA to prohibit it from issuing an NPDES permit "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of *all affected States*." 40 CFR § 122.4(d) (emphasis added); *accord Arkansas v. Oklahoma*, 503 U.S. 91, 105 (1992) (noting that the regulation dates back from 1973). EPA has promulgated two other regulations with similar requirements. The first requires each NPDES permit to include conditions necessary to "[a]chieve [WQSs] established under section 303 of the CWA, including State narrative criteria for water quality." 40 CFR § 122.44(d)(1). The second requires each NPDES permit to "[i]ncorporate any more stringent limitations…established under Federal or State law or regulations in accordance with section 301(b)(1)(C)." 40 CFR § 122.44(d)(5). Pollutant controls that may be set aside, for any reason, at the sole election of the discharger—even if those increased loadings will contribute to further violations of water quality standards—cannot be said to "ensure" compliance with these standards. EPA is thus obligated under Section 301 of the Act and implementing regulations to include enforceable limits in the permit.

There is a reasonable level of scientific certainty given the facts in the record to establish an effluent limit

Some commenters argued that more data and modeling is necessary before determining whether further nitrogen controls from out-basin-dischargers would be necessary and, if so, the precise extent of those reductions. While there will always be an irreducible amount of uncertainty given the varied sources of nitrogen loading into LIS and the size and complexity of that water body, EPA is nevertheless obligated to exercise its scientific expertise and apply its technical judgment based on the information it has at the time of permit reissuance, which under the Act is called for at regular intervals not to exceed five years. *See Upper Blackstone*, 690 F.3d at 22 ("[N]either the CWA nor EPA regulations permit the EPA to delay issuance of a new permit indefinitely until better science can be developed, even where there is some uncertainty in the existing data."); *Ethyl Corp. v. EPA,* 541 F.2d 1, 28 (D.C.Cir.1976) (en banc) ("[R]ecognizing ... the developing nature of [the

field].... [t]he [EPA] Administrator may apply his expertise to draw conclusions from suspected, but not completely substantiated, relationships between facts, from trends among facts, from theoretical projections from imperfect data, from probative preliminary data not yet certifiable as 'fact,' and the like."). But here, once again, what remains certain and undisputed on the record before EPA is the fact that large amounts of nitrogen from out-of-basin dischargers contribute to ongoing nitrogen water quality impairments in LIS, which provides a reasoned basis to support the imposition of enforceable effluent limitations for the pollutant. *Miami–Dade County v. EPA,* 529 F.3d 1049, 1065 (11th Cir.2008) (holding that the "EPA is compelled to exercise its judgment in the face of scientific uncertainty unless that uncertainty is so profound that it precludes any reasoned judgment"). In light of this fact and applicable case law construing the Act, EPA is more than entitled under the Act to proceed with the imposition of reasonable permit effluent limits, designed to achieve gross reductions, on the out-of-basin dischargers.

There has been sufficient opportunity for public comment

Finally, contrary to several commenters' assertions, the permitting approach underlying this proceeding has been subject to a very significant degree of public process, input and scrutiny. MassDEP and EPA held two public meetings for Massachusetts permittees in the Long Island Sound watershed to explain the approach on June 7, 2019 in Springfield, MA and on June 21, 2019 in Greenfield, MA. EPA has received substantial public comments regarding proposed numeric TN effluent limits as a result of extended (60 days) public notice for the 2018 Draft Permit for Springfield Water and Sewer Commission and regarding numeric effluent limits. Doubling the time for comment required by regulations governing the permit issuance was reasonable, especially given that the permit is long expired, water quality impairments are ongoing (and tend to intensify over time when nutrient inputs continue unabated), and Springfield is a large contributor of nitrogen to LIS.

SPECIFIC COMMENTS AND RESPONSES

COMMENTS SUBMITTED BY THE SPRINGFIELD WATER AND SEWER COMMISSION ("SWSC" OR "PERMITTEE")

V. Comments submitted by Joshua D. Schimmel, Executive Director, SWSC by Letter Dated February 9, 2018

Comments Related to CSO and Wet-Weather Flow Issues

Comment 1

CO-PERMITTEE: The draft NPDES permit is issued to the SWSC, but also to the six towns identified above. While none of these towns own or operate a CSO (all CSOs are located in the City of Springfield), their collection systems contribute to a combined system, and all wastewater from the six municipalities eventually flows to the SRWTF for treatment and discharge (or overflows at a CSO in Springfield).

The following concerns are noted:

Lack of Legal Basis to Permit Satellite Communities:

The Clean Water Act (the Act) does not authorize EPA to issue NPDES permits to the Satellite Communities, much less include them as co-permittees in the Draft Permit. The Act prohibits any person from discharging pollutants except in compliance with its permitting requirements:

> Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.[25]

EPA may issue permits for the discharge of pollutants, so long as the discharge complies with all applicable requirements:

> Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.[26]

[25] 33 USC 1311(a).
[26] 33 USC 1342(a)(1).

A discharge of pollutants that must be permitted is defined as follows:

> The term "discharge of a pollutant" and the term "discharge of pollutants" each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.[27]

A point source from which pollutants are discharged is defined as follows:

> The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.[28]

Note that the structures that are considered point sources are defined in terms of singular items. They are not defined as, for example, a collection of such items that might make up a "POTW." EPA uses the "collection" concept in its memorandum discussing Satellite Communities that is attached to SWSC's Draft Permit (the EPA Region 1 NPDES Permitting Approach for Publicly Owned Treatment Works that Include Municipal Satellite Sewage Collection Systems ("the Region 1 Approach")). But that "collection" concept is not consistent with the CWA. An NPDES permit is required for the specific conveyance from which pollutants are discharged. In the case of the Draft Permit, those point sources are the enumerated outfalls for treated wastewater and CSO discharges, owned and operated by SWSC.

Similarly, the person to which the Act's permitting requirements apply for any particular discharge is defined in the singular:

> The term "person" means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.[29]

Thus, the discharge of any pollutant to navigable waters from any point source by any person is prohibited except in compliance with the Act. None of the applicable terms specifically contemplated multiple permittees responsible for a single discharge.

However, the possibility of separate ownership and operation of a particular point source is contemplated. In that instance, a single person is responsible for obtaining the necessary permit:

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[27] 33 USC 1362(12).
[28] 33 USC 1362(14); 40 CFR 122.2.
[29] 33 USC 1362(5).

> Who applies? When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.[30]

The grants portion of the Act is structured similarly. Despite the fact that a particular POTW can encompass many tributary and supporting structures,[31] the Act contemplates granting construction funds to a single entity:

> The Administrator shall not make grants from funds authorized for any fiscal year beginning after June 30, 1974, **to any State, municipality, or intermunicipal or interstate agency** for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that—[32]

Nowhere does the Act specifically contemplate issuing either permits or grants to more than one person for a single POTW or a single discharge.

In fact, the Act explicitly recognizes that a POTW could serve multiple communities, whose collection systems are not part of the permitted POTW:

> The Administrator shall not approve any grant after July 1, 1973, for treatment works under this section unless the applicant shows to the satisfaction of the Administrator that **each sewer collection system discharging into such treatment works** is not subject to excessive infiltration.[33]

Thus, contrary to assertions contained in the Region 1 Approach, a satellite community's collection system does not automatically become a part of the POTW to which it connects for the purpose of conveying wastewater to a regional treatment plant. Nor does that satellite community become a person responsible for the discharge of pollutants from that POTW by the mere fact of its connection. Only the owner/operator or, if different, the operator of the POTW is responsible for obtaining and complying with an NPDES permit related to that discharge.

Congress could have provided for single permits to cover multiple collection systems in the NPDES program, but did not. In contrast, the Act does provide for such permits in the stormwater program:

Municipal discharge. Permits for discharges from municipal storm sewers—

(i) may be issued on a system- or jurisdiction-wide basis[34]

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[30] 40 CFR 122.21(b).
[31] 33 USC 1292(2).
[32] 33 USC 1281(g)(2) (emphasis added).
[33] 33 USC 1281(g)(3) (emphasis added).
[34] 33 USC 1342(p)(3)(B); *see also* 40 CFR 122.33.

In the absence of clear authority in the NPDES portions of the Act, EPA cannot presume such authority exists.

As a result, the Region 1 Approach is not supported by the Act, and the Satellite Communities should not be included as co-permittees in the Draft Permit. SWSC recognizes that the Region 1 Approach has been upheld by the Environmental Appeals Board.[35] However, that opinion has not been subject to judicial review, and Springfield believes that the Region 1 Approach should be determined to be unauthorized and the EAB reversed.

It appears that even EPA does not consider the Satellite Communities to be dischargers for purposes of the entire Act. For example, the Draft Permit does not require the Satellite Communities to comply with all provisions of the Act—only Parts I.C, I.D, and I.E apply—despite the Act's requirement that permittees be required to comply with all permitting provisions.[36] Further, EPA seems to go to great lengths to justify treating the Satellite Communities as co-permittees for purposes of the Draft Permit. This implies that in some circumstances, EPA would not treat all satellite communities to a particular POTW as co-permittees. This ignores the fact that the Act's permitting requirements are not discretionary. If all satellite communities are dischargers, then all satellite communities must obtain NPDES permits and be subject to all NPDES permitting requirements. If not, then the Region 1 Approach is not supported by the Act.

Following the Region 1 Approach leads to some unintended consequences that EPA apparently has not considered. Examples include:

a) Inconsistency in Co-Permittee Requirements: The draft permit page 1 of 24 states:

> *"…are co-permittees for **Part C**, Unauthorized Discharges; **Part D**, Operation and Maintenance…and **Part E**, Alternate Power."*

However, the Fact Sheet page 5 of 34, Part I, paragraph three states:

> *"These municipalities are co-permittees for certain activities pertaining to proper operation and maintenance of their respective collection systems (see **Part I.C. and I.D** of the draft permit."*

b) Liability: The draft permit page 1 of 24 states*: "The permittee and each co-permittee are severally liable under Part C, Part D and Part E for their own activities and required reporting with respect to the portions of the collection system that they own and operate. They are not liable for violations of Part C, Part D and Part E committed by others relative to the portions of the collection system owned and operated by others. Nor are they responsible for any reporting that is required of other permittees under Part C, Part D and Part E."*

The issue of liability for violations of the permit when such a permit is issued to multiple entities is a concern. An example would be if the SRWTF experiences an unauthorized bypass due to excessive flows. Which of the six named co-permittees would be held responsible for causing or

[35] *In re Charles River Pollution Control District*, NPDES Appeal No. 14-01 (EAB Feb. 4, 2015).
[36] 33 USC 1342(a).

contributing to that discharge? What if CSO discharges increase at a particular location over time? Would the permittee, a co-permittee, or combination of co-permittees be responsible?

c) Unauthorized Discharges: On page 13 of 24, Part C, the draft permit states: *"The permittee and co-permittees are authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Part I.A.1 and Part I.B.1 of this permit."*

While the above language is common to NPDES permits across the country, of concern in this permit is the inability to clearly identify liability with a single permit issued to seven entities (SWSC and six co-permittees).

For example, it is our understanding that discharge location 042 has historically been treated as an emergency bypass, and we will request that it continue to be treated so. However, if the U.S. Environmental Protection Agency (EPA) fails to grant an affirmative defense for its use, SWSC may be subject to fines and penalties, yet the cause of the unpermitted discharge is excessive flows [perhaps due to illegal cross-connections between storm drain and sanitary sewer systems, failure to implement inflow and infiltration (I/I) control, etc.] from any one or more of the six co-permittees.

In addition, it is not clear that DOJ would be empowered to enforce violations of the Draft Permit by any of the Satellite Communities. Recent guidance issued by the Associate Attorney General prohibits DOJ from using its enforcement authority to effectively convert agency guidance documents into binding rules.[37] In the absence of statutory or regulatory authority requiring issuance of permits to every satellite community that connects its collection system to a POTW, the Region 1 Approach is simply a guidance document, which cannot be legally enforced.

Request: EPA must consider removing the co-permittees from this permit and seeking other means to regulate the upstream towns. If that is not possible, EPA must clarify if the co-permittees are responsible for Part C, Part D and Part E, or are only responsible for Parts C and D; critically examine language regarding liability and modify it to limit SWSC's liability for non-compliance with the permit related to co-permittees; and clarify the liability of co-permittees for hydraulically connected systems.

Response 1

As the commenter observes, the question of whether municipal satellite collection systems are subject to the NPDES program because they fall within the definition of POTW and discharge pollutants to U.S. waters has been litigated before the Environmental Appeals Board and EPA's interpretation of the Act and implementing regulations has been upheld. *Charles River Pollution Control District*, 16 E.A.D. 623 (EAB 2015). This decision was not

[37] *Memorandum Limiting Use of Agency Guidance Documents in Affirmative Civil Enforcement Cases*, Associate Attorney General (Jan. 25, 2018).

based on Region 1 guidance, but was instead based on the plain meaning of the Act and implementing regulations. The Board found the Region's permitting approach to be consistent with both. The issue need not be relitigated at every permit issuance. EPA reaffirms the reasoning in that decision here, and the positions set forth in its principal brief in that case.[38]

There can be no serious dispute that the satellite sewage collection systems owned by the Towns fall within the language of the section 212 definition of "treatment works." Under the NPDES permit regulations at 40 CFR § 122.2, a "POTW is defined at § 403.3 of this chapter." 40 CFR § 122.2. Section 403.3(q) in turn provides:

> The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition of [POTW] includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. Id. § 403.3(q). CWA section 212 states that the term "treatment works" includes "sewage collection systems, pumping, power and other equipment, and their appurtenances" and "sanitary sewer systems." CWA § 212(2)(A)-(B), 33 U.S.C. § 1292(2)(A)-(B).

Nor is there is any question whether the pipes and other conveyances that comprise the municipal satellite collection systems fall within the definition of point sources whose wastewater flows reach U.S. waters. The commenter itself concedes that the municipal satellite collection systems at issue here are part of the POTW (they "contribute to a combined system") and that these components of the POTW discharge to U.S. waters ("all wastewater from the six municipalities eventually flows to the SRWTF for treatment and discharge (or overflows at a CSO in Springfield)").

The commenter bases its objections to the co-permittee provisions on two erroneous premises: that a discharge must be directly into U.S. waters in order to fall within the ambit of the Act and that NPDES permits may only be issued to the owner or operator of the physical outfall to those waters, even if there are multiple conveyances owned by different entities contributing to that discharge.

This interpretation of the Act, which shares attributes of what has been termed the terminal point source theory, is incorrect, as the Supreme Court has ruled, because it is at odds with the text, structure and objectives of the Act, and if adopted would amount to a roadmap for evading its strictures. The CWA does not require a discharge from a point source to be "directly" or "immediately" into a jurisdictional surface waters in order to for it to be covered by the NPDES permit program. *See, e.g.*, *Rapanos v. United States*, 126 S.Ct. 2208 (2006)

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[38] https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/Filings%20By%20Appeal%20Number/C158D222DA78251E85257D63004CC1EA/$File/Region%201%20Response%20to%20CRPCD%20Petition%20(092614).pdf.

(permits required even for point source pollutants that "do not emit 'directly into' covered waters, but pass 'through conveyances' in between.").

Under the Act, a party does not cease to discharge pollutants merely because the pollutants pass through a third-party conveyance before reaching the waters of the United States. Construing those portions of the POTW that are upstream of treatment facility as also "discharg[ing] a pollutant" and subject to the NPDES program is consistent with the line of cases and regulations implementing the Act that provide that persons who discharge pollutants through conveyances owned by another entity may be subject to NPDES permit requirements. *E.g.*, *Dague v. Burlington*, 935 F. 2d 1343, 1354-55 (2d Cir. 1991) (affirming district court holding that city discharged pollutants without a permit when pollutants from city's landfill entered pond and flowed through culvert owned by a third party into navigable waters), rev'd in part on other grounds, 505 U.S. 557 (1992); *United States v. Ortiz*, 427 F.3d 1278, 1284 (10th Cir. 2005) (holding facility owner liable for discharging pollutants through sanitary sewer system that connected to storm drain owned and operated by another entity and flowed to waters of the United States); *San Francisco Baykeeper v. W. Bay Sanitary Dist.*, 791 F. Supp. 2d 719, 771 (N.D. Cal. 2011) (NPDES permit required for owner of collection system discharging sanitary sewer overflow into waters of the United States via municipal separate storm sewer owned by another entity); *Puerto Rico Campers' Association v. Puerto Rico Aqueduct and Sewer Authority*, 219 F. Supp. 2d 201, 217 (D. Puerto Rico 2002) (holding that conveyance of pollutants from one waste water treatment plant to another constituted a "discharge" under the CWA); *United States v. Velsicol Chemical Corp*., 483 F. Supp. 945, 947 (D.C. Tenn. 1976) (holding that discharges into a municipal sewer system are covered under the CWA because "[d]efendant knows or should have known that the city sewers lead directly into the Mississippi River and this is sufficient to satisfy the requirements of discharging into 'water of the United States,'"); *see also* 40 CFR §§ 122.26(a)(4), (a)(5) (industrial stormwater discharges through municipal storm sewer system), 122.44(m) (discharges through privately owned treatment works). *See generally Pepperell Assocs. v. United States EPA*, 246 F.3d 15 (1st Cir. 2001) (factory owner fined for oil that spilled from a boiler gasket, into an industrial drain, through a conduit, and eventually into a creek). EPA thus rejects the commenter's attempt to impose an arbitrary limitation on the reach of the Act and NPDES permitting program, *i.e.*, that they are limited to regulating the owner or operator of the actual outfall pipe.

It follows that the Act, for these same reasons, does not restrict the reach of an NPDES permit for a point source discharge to a single owner or operator where there are multiple contributing dischargers. The commenter hinges its reading of the Act on the use of the singular in definitions of "point source" and "person." There is nothing in the text, structure or legislative history of the Act that would imbue this drafting decision with the regulatory consequence envisioned by the commenter. In addition to being inconsistent with a long line of case law construing the Act that are cited above, the commenter's theory cannot be squared with EPA regulations implementing Section 301 and 402 that subject multiple persons contributing pollutants from multiple point sources to a combined discharge to the NPDES program. 40 CFR §§ 122.26(a)(4), (a)(5) (industrial stormwater discharges through municipal storm sewer system), 122.44(m) (discharges through privately owned treatment works). Either this manner of regulation is foreclosed as a matter of statute or it is not. While

the commenter may have preferred the existence of a regulation as a basis for imposing a limited set of requirements on co-permittees, EPA is authorized to directly implement Section 301 and 402 based upon their plain meaning. Further, the commenter's reading of the Act would hamstring EPA from carrying out its obligations under Section 301 and 402. Under the commenter's theory, a single facility with multiple outfall points would require a separate permit for each one. Or, a single facility with a single outfall point but owned or operated by multiple persons would require multiple NPDES permits. Alternatively, under the commenter's reasoning, if the plural rather singular were used, then permits could not be issued if a single person owned or operated the multiple outfalls, or multiple persons operated a single outfall. This interpretation of the Act does not lead to reasonable results and would compromise orderly and efficient implementation of the Act. The more natural reading, grounded in canons of statutory construction, is simply that the singular includes the plural, and vice versa. The opening section of the United States Code, for example, declares that "[i]n determining the meaning of any act of Congress, unless the context indicates otherwise—words importing the singular include and apply to several persons, parties, or things; [and] words importing the plural include the singular; …." 1 U.S.C.A. § 1. Congress "does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes." *Whitman v. Am. Trucking Associations*, S. Ct. 903, 909–10 (2001). The commenter's textual arguments ultimately founder upon this principle.

In sum, the municipal satellite collection systems are themselves operators of point sources that discharge pollutants to U.S. waters, and thus subject to the NPDES permitting program, even if their contribution to the combination of pollutants in the final discharge from the outfall at the POTW treatment plant operated by Springfield cannot be easily distinguished.

In response to arguments made by the commenter about inconsistencies in permit requirements, EPA has clarified that the co-permittees are responsible for Parts C (Unauthorized Discharges), D (Operation and Maintenance), and E (Alternate Power Source) in the Final Permit (EPA acknowledges that Part E was inadvertently omitted from the description of the parts of the Draft Permit which apply to the co-permittees). EPA appreciates the commenter pointing this out.

EPA has examined language regarding liability and does not discern any ambiguity or imprecision in it: The Permittee and co-permittees each are liable for complying with their respective obligations in the Final Permit, which are expressly delineated and set forth on the face of the permit. Complexity or potential difficulty in developing a future enforcement action is not a reason to forestall compliance with the requirements of the Act. EPA would be open to language that might further clarify the obligations and responsibilities of the participants in this arrangement, but neither Springfield nor the co-permittees have offered any proposed language in this regard. If, in the future EPA or a citizen, were to seek to enforce the provisions of the permit, the Permittee and/or co-permittees may raise any concerns it has about such an enforcement action at that time and in the appropriate forum, whether such action is brought administratively or in federal court. As with a single permit issued to a single owner or operator, if either the Permittee or co-permittee violate the

requirements of their permits, liability could attach assuming EPA and/or citizens carry their burdens based on the law and facts of any future case.

These same considerations apply to the issue of unauthorized discharges.

With respect to the concerns expressed in the above comment related to DMR reporting requirements, total influent flow refers to the instantaneous flow at the time of the closest measurement taken when the bypass of secondary treatment commenced as well as when it was terminated. This clarification has been in made in Part I.A.1., Footnote 3 of the Final Permit.

Comment 2

Blending: SWSC has identified several concerns related to the discussion of a secondary bypass (blending) as described below:

a) Cutoff Flow for Bypass of Secondary Treatment: The draft permit page 3 of 24 states: *"A bypass of secondary treatment is allowed when wet weather flow exceeds the wet weather capacity of the secondary treatment."* SWSC is concerned that the "wet weather capacity of the secondary treatment" is not defined, and is left open to interpretation. SWSC is aware that the draft Fact Sheet states: *"The Facility has the capacity to provide...secondary treatment for flows up to 134 MGD."* However, the facility operator will likely need to make a determination to bypass secondary treatment based upon peak hourly flow or some measure other than an average daily flow volume (which cannot be determined until the day has concluded). This leaves the Permittee open to a violation and/or penalty due to the interpretative nature of the bypass language. Furthermore, future changes in plant processes to meet the regulatory requirements will continue to inform changes in how the bypass is initiated.

   Request: Modify the language to read: *"A bypass of secondary treatment is ~~allowed~~ authorized when peak wet weather flow exceeds the wet weather capacity of the secondary treatment."*

b) DMR Reporting Requirements: The draft permit page 5 of 24, footnote 3, requires that the SRWTF record the date, time, and "total influent flow" at time of initiation and termination of the bypass. The permit does not define "total influent flow" or the mechanism for its measurement.

   Request: EPA must define "total influent flow" as either the instantaneous flow at the time of measurement, or the total flow received on a calendar day up to that point.

c) Blending Is Considered Non-Compliance: The draft permit page 5 of 24, footnote 3, states: *"A bypass of secondary treatment also is subject to the requirements of Part II.B.4.c and Part II.D.1.e of this permit."*

   Part II.B.4.c refers to an unanticipated bypass, for which notification in accordance with II.D.1.e must be submitted. Notification requirements are necessary for *"any non-compliance which may*

endanger health or the environment. This section requires not only 24-hour reporting, but a written submission which details the cause of the non-compliance, and steps taken to reduce, eliminate and prevent reoccurrence of the non-compliance."

Blending after primary treatment during high flow events was part of the original plant design to maximize the amount of flow it can treat. It is of particular concern that each time SWSC initiates blending of primary and secondary treated flows, it is considered "non-compliance." Not only does this expose the Facility to fines and penalties from the EPA, it also exposes the SRWTF to third party lawsuits. Additionally, it is perplexing why EPA is choosing to identify blending at this facility as a non-compliant event, when in the Fact Sheet page 8 of 34, EPA states: *"At this time, there(sic) no feasible alternatives to this bypass have been identified without the discharge of additional untreated sewage in the system's CSOs."*

Note that in accordance with the EPA 1994 Combined Sewer Overflow Control Policy 59 Fed. Reg. 18,688 (Apr. 19, 1994) (National CSO Policy), Section II.C.7 "Maximizing Treatment at the Existing POTW Treatment Plant," a facility may be authorized to allow a CSO-related bypass of secondary treatment without the need to provide approval on a case-by-case basis, where it can be shown that the facility has completed a No Feasible Alternatives Analysis in accordance with this section.

Specifically, EPA's National CSO Policy clearly indicates that a permit may "define the specific parameters under which a bypass can <u>legally</u> occur," and further states:

> Under this approach, EPA would allow a permit to <u>authorize</u> a CSO-related bypass of the secondary treatment portion of the POTW treatment plant for combined sewer flows in certain identified circumstances.

59 Fed. Reg. at 18,693 (emphasis added). The CWA requirement that "each permit…for a discharge from a municipal combined storm and sanitary sewer shall conform to" the CSO Policy provides statutory authority for issuance of permits authorizing peak wet weather discharges consistent with the National CSO Policy. CWA 402(q)(1), 33 USC 1342(q)(1).

Further, EPA's own guidance documents support the <u>authorization</u> of a CSO-related bypass. Combined Sewer Overflows Guidance for Permit Writers (EPA 832-B-95-008, Sept. 1995) (CSO Permit Writers Guidance). That document has never been withdrawn by EPA, and provides the following example permit language for authorized CSO related bypasses:

> A CSO-related bypass of the secondary treatment portion of the POTW treatment plant is authorized when the flow rate to the POTW treatment plant is as a result of precipitation event exceeds [insert flow rate in MGD]. Bypasses that occur when the flow at the time of the bypass is under the specified flow rate are not authorized under this condition and are subject to the bypass provision at 40 CFR 122.41(m).

Finally, it is important to note that new requirements proposed by EPA for the secondary bypass reflects a substantial change in the regulatory requirements that are imposed on NPDES dischargers, which are proposed to be imposed without following any of the procedures required

before such a change can be made. The U.S. Court of Appeals for the D.C. Circuit has held as follows:

> Once an agency gives its regulation an interpretation, it can only change that interpretation as it would formally modify the regulation itself: through the process of notice and comment rulemaking.

Alaska Professional Hunters Assoc. v. Federal Aviation Admin. 177 F.3d 1030, 1033-34 (D.C. Cir. 1999), quoting *Paralyzed Veteran of America v D.C. Arena*, 117 F.3d 579, 586 (D.C. Cir. 1977).

Since the Fact Sheet identifies that there are "no feasible alternatives" to the secondary bypass, clearly SWSC is authorized under this permit to operate a secondary bypass. Therefore, the event should not be identified as a "non-compliant" event (since it is clearly authorized) and reporting requirements under II.D.1.e should also not be required.

Request: EPA must clearly identify the bypass of secondary treatment under the circumstances described in the permit as an authorized bypass in accordance with the National CSO Policy Section II.C.7, and remove those sections of the permit that identify this treatment process as non-compliant with the permit.

If EPA will not authorize a secondary bypass under this permit, the SWSC should be given the opportunity to provide a No Feasible Alternatives Analysis. If the secondary bypass is not ultimately explicitly stated as being compliant with the permit, SWSC may be forced to discontinue bypassing under high-flow conditions, which could result in the overall treatment process being compromised so that a poorer quality effluent is discharged, or additional untreated flows will be bypassed at 042, or in upstream CSOs. SWSC believes it is environmentally beneficial to provide at least partial treatment (through blending) rather than no treatment at all, but if the secondary bypass is regulated as an unauthorized bypass, SWSC will need to reevaluate this practice.

d) New Metering Location: On page 5 of 24 of the draft permit, footnote 3 states: *"The following information shall be reported and submitted as an attachment to the monthly DMRs for each day there was a bypass of secondary treatment: date and time of initiation, total influent flow at time of initiation, date and time of termination, total influent flow at time of termination, total duration of flow, and total volume of flow…"* Sub footnote a also states: *"Flows shall be measured using a meter."*

While the SWSC does not object to providing information on the DMRs relative to date, time and instantaneous flow recordings at the initiation and termination of the secondary bypass, SWSC does not believe that metered readings of the flow volume in the secondary bypass line is warranted given the extreme rarity of plant bypasses, the level of effort that would be required to accomplish this request, and the lack of a regulatory need to require internal plant metering of such flows.

For example, in 2017, there was only one secondary bypass that lasted 1.7 hours. Given the estimated bypass flow of 3.5 million gallons and the fact that the SRWTF accepted 12.94 billion gallons of flow over the course of 2017, the bypassed flow represented less than 0.03% of total plant flow. Coupled with this infrequent use of the bypass, the physical conditions that exist at the plant would make installing a meter extremely difficult in the bypass line.-This would be a very expensive effort to obtain a flow reading once or twice a year.

Note that the quantity of secondary bypass flows can be estimated by SWSC, and SWSC would be willing to provide data as a calculated determination, rather than a metered determination.

Request: Please clarify that "total influent flow" refers to instantaneous flow at the time of initiation and termination of the secondary bypass. In addition, SWSC requests that secondary bypass flow not be required to be metered and instead be calculated as described above.

e) New Sampling Location: In the draft permit page 5 of 24, footnote 4 states: *"All required effluent samples shall be collected at a representative point following treatment and the comingling of secondary effluent with flows which bypass secondary treatment…"*

While SWSC does not object to taking all required effluent samples of the comingled flow, the requirement to utilize these samples to determine compliance is a new requirement, and SWSC has very limited data to determine compliance relative to plant flows and operations. Therefore, SWSC requests a compliance schedule of 18 months prior to this sampling location being used for purposes of compliance. This will enable SWSC to have an opportunity to sample the comingled flows for a period of 12 months over a variety of flow and weather conditions, and to then provide time for an engineering analysis to determine what, if any, plant operations need to be modified to ensure that NPDES permit effluent limitations will be met at all times, including during secondary bypass.

Request: Provide an 18-month compliance schedule so that SWSC can evaluate sampling data after comingling for the purpose of permit compliance.

Response 2

Permit conditions related to bypasses of secondary treatment are set forth in Part II.B.4. of the Final Permit. Specifically, in accordance with 40 CFR § 122.41, Part II.B.4 incorporates verbatim the Bypass rule at 40 CFR § 122.41(m). Under EPA regulations, "bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering

> judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
>
> (C) The permittee submitted notices as required under paragraph (m)(3) of this section."[39]

However, EPA "may approve an anticipated bypass, after considering adverse effects, if [EPA] determines that it will meet the [above] three conditions."[40]

The Permittee's comments regarding the authorization of a CSO-related bypass reference Section 7 of the 1994 CSO Policy, entitled "Maximizing Treatment at the Existing POTW Treatment Plant." 18688 Fed. Reg. at 18693. Following the approach set forth therein, EPA may include a CSO-related bypass provision in the permit if there are no feasible alternatives to bypassing under specific conditions. Section 7 of the CSO Policy further provides that:

> "For approval of a CSO-related bypass, the long-term CSO control plan, at a minimum, should provide justification for the cut-off point at which the flow will be diverted from the secondary treatment portion of the treatment plant, and provide a benefit-cost analysis demonstrating the conveyance of wet weather flow to the POTW for primary treatment is more beneficial than other CSO abatement alternatives such as storage and pump back for secondary treatment, sewer separation, or satellite treatment."
>
> …"[T]he feasible alternatives requirement of the [bypass] regulation can be met if the record shows that the secondary treatment system is properly operated and maintained, that the system has been designed to meet secondary limits for flows greater than the peak dry weather flow, plus an appropriate quantity of wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow. The feasible alternative analysis should include, for example, consideration of enhanced primary treatment (e.g., chemical addition) and non-biological secondary treatment. Other bases supporting a finding of no feasible alternative may also be available on a case-by-case basis."

Id. at 18693-94. EPA's Combined Sewer Overflows Guidance for Permit Writers further articulates that the permittee should "provide adequate justification for the CSO-related bypass and clearly define the wet weather flow conditions and flow rate at which secondary treatment is exceeded." EPA Combined Sewer Overflows Guidance for Permit Writers (Sept. 1995) 4-36.

EPA requires further information or analysis to support inclusion of CSO-related bypass conditions in the Permit for specific flows. *See In re: City of Lowell*, 2020 WL 3629979 (E.A.B. June 29, 2020) at 58-59, n.36 (noting that "CSO Policy emphasize[s] that the permittee bears the burden of showing that there is no feasible alternative to bypass of

[39] 40 CFR § 122.21(m)(4).
[40] *Id*.

treatment"). Although the Permittee's 2014 Integrated Wastewater Plan ("IWP") does contain a "Financial Capability Assessment," it does not expressly analyze the cost/benefits of eliminating the secondary bypass versus other CSO abatement project. *See CSO Policy.* at 18693. Indeed, the IWP is largely silent on the issue of bypass and the elimination of bypass. The Permittee has not provided a justification for the cut-off point for the bypass or specified at what level of flow for which it seeks bypass approval. *See id*.

EPA acknowledges that the Permittee has submitted a High Flow Wet Weather Management Standard Operating Procedure (SOP) dated August 2016, in preparation for a compliance inspection by EPA. The SOP identifies the circumstances under which the SWSC diverts some wet weather flows around secondary treatment. The SOP does not itself satisfy the requirements for the approach outlined in Section 7 of the CSO Policy such that it alters the appropriate permitting approach for CSO-related bypasses. EPA notes that the SOP states that while high flows typically result in secondary treatment of 134 MGD, higher flow rates up to 185 MGD "may be accepted through the secondary treatment process" in certain situations. EPA seeks clarification on when secondary treatment is technically feasible in order for the Region to inform the decision on "defin[ing] under what specific wet weather conditions a CSO-related bypass is allowed." *See id*. Additionally, EPA notes that in order to approve a bypass in the permit it must "also ensure that the bypass will not cause exceedances of WQS."

Consequently, the permit does not approve the bypass of secondary treatment. The Permittee is welcome to submit such documentation for EPA consideration. EPA is ready to work with the Permittee to provide any additional clarification necessary on the type of information it would need to submit to support its request for bypass approval in the permit. Should the Permittee provide adequate information for approval of the CSO-related bypass during the term of this current permit term, EPA will consider modifying the permit in order to do so.

Importantly, EPA's decision not to approve the bypass in the permit does not mean that all bypasses from the facility going forward may not be approved or that the Permittee "may be forced to discontinue bypassing under high-flow conditions," as asserted in the comment. Rather, it means "it is the responsibility of the Permittee to document, <u>on a case-by-case basis</u>, compliance with 40 CFR § 122.41(m) in order to bypass flows legally," 59 Fed. Reg. at 18693 (emphasis added), which is the default, regulatory bypass approach that has been in place in past permits and other Region 1 issued permits for CSO-WWTFs. *See In re: City of Lowell*, 2020 WL 3629979 (E.A.B. June 29, 2020) at 58-59.

With regard to the Permittee's assertion that EPA determined in the fact sheet "that there are 'no feasible alternatives' to the secondary bypass," EPA does not agree that this was a formal determination within the meaning of Section 7 of the CSO Policy. That statement in the Fact Sheet occurred within a technical explanation of the wastewater collection system in a section entitled "Facility Information." It was not intended as a legal determination. As explained above, EPA is lacking, as it was at the time of issuing the Fact Sheet, a significant amount of information it would need in order to support a no feasible alternatives determination to approve secondary bypass. Until EPA has such information, it cannot and

has not made a determination regarding no feasible alternatives in order to approve bypass in the permit.

The notification requirements that apply in the event of a bypass are set forth in Part II.B.4. of the Final Permit. Specifically, if the Permittee knows in advance of the need to bypass secondary treatment (i.e., an anticipated bypass), prior notice shall be submitted at least ten days before the date of the anticipated bypass (see Part II.B.4.c. of the Final Permit.). In the event of a bypass which was not anticipated, (i.e., unanticipated bypass). notification shall be submitted within twenty-four hours of the bypass in accordance with Part II.D.1.e. of the Final Permit. Footnote 3 to Part I.A.1. of the Final Permit has been modified to clarify that "a bypass of secondary treatment is subject to the requirements of Part II.B.4. (and not just Part II.B.4.c.) of the permit (which incorporates the regulations in their entirety which pertain to bypasses of secondary treatment established at 40 CFR 122.41(m)). The statement in Part I.A., page 3 of the revised Draft Permit which reads as "A bypass of secondary treatment is allowed when wet weather influent flow exceeds the wet weather capacity of the secondary treatment" has been removed from the Final Permit, since footnote 3 describes the pertinent sections of the draft permit which apply to bypasses of secondary treatment.

EPA disagrees that "new requirements" related to secondary bypass "reflect a substantial change in the regulatory requirements." Permit provisions incorporating the *Bypass* rule at 40 CFR § 122.41(m) were contained in the previous permit and are therefore not new. Moreover, the permit provisions themselves are verbatim recitations of regulatory requirements that have been in place since 1984 (49 Fed. Reg. 37998, 38037) (Sept. 26, 1984). The Final Permit contains only three new permit provisions with regard to secondary bypass: (1) the requirement to report bypass information on monthly DMRs; (2) the requirement to measure the flows that bypass secondary treatment using a meter; and (3) the prohibition on receiving septage during activation of the secondary treatment bypass (see below). EPA does not assess these requirements to be "substantial."

With respect to the concerns expressed in the above comment related to DMR reporting requirements, total influent flow refers to the instantaneous flow at the time of the closest measurement taken when the bypass of secondary treatment commenced as well as when it was terminated. This clarification has been in made in Part I.A.1., Footnote 3 of the Final Permit.

With respect to the comment regarding a new metering location, while the WWTP is currently being operated in a manner which reduces the use of the secondary bypass, it is conceivable that future operations and or conditions may change which may result in more frequent bypassing of flows around secondary treatment. As such, the Final Permit remains unchanged from the Draft with respect to requiring metering of flows which bypass secondary treatment. The date in which this requirement goes into effect has been extended to within six months of the effective date of the Final Permit to allow for the installation of metering equipment (see Part I.A.1., Footnote 3, of the Final Permit).

With respect to the comment regarding a new sampling location, the requirement to sample the effluent at a location that will yield data that is representative of the discharge is not new

to this permit. Further, this is required by the federal NPDES regulations established at 40 CFR § 122.41(j)(1), which require samples and measurements taken for the purpose of monitoring to be representative of the monitored activity. Additionally, EPA guidance states that "*Effluent monitoring locations should be established after all industrial uses and treatment processes"* and that the "*point where a final effluent limitation applies and the point where monitoring is required must be the same*". (See *NPDES Permit Writers' Manual, Chapter. 8.1.2.3*, USEPA September 2010 [EPA833-K-10-001]). Since effluent which bypasses secondary treatment flows to the chlorine contact chamber where it is combined with secondary effluent before being discharged to the Connecticut River through outfall 001, the "combined effluent" must meet the effluent limitations which apply to outfall 001, and a "representative sample" would be one that is collected of the comingled effluent, prior to its discharge through outfall 001. Therefore, the Final Permit maintains the requirement to sample the effluent at a representative point following treatment and the comingling of secondary effluent with flows which bypass secondary treatment remains. EPA notes, however, that the Permittee is not precluded from conducting additional sampling nor are they precluded from making operational modifications for optimizing treatment efficiencies under various flow conditions.

Comment 3

<u>Reclassification of Outfall 042 from an Emergency Plant Bypass to a CSO</u>:

Throughout the draft permit, existing emergency plant bypass outfall 042 has been re-defined as a CSO. This is of significant concern to SWSC, as the reclassification of this outfall will result in unnecessary expenditures and no environmental or water quality benefit, and will, in fact, provide less regulatory oversight than is currently the case.

The following concerns are noted:

a) <u>Regulatory Basis Not Provided</u>: The currently effective permit for the SRWTF (issued in 2001) as well as the currently effective CSO permit (issued in 2009) both identify the Springfield system as having 23 CSOs, which does not include discharge 042. Permit MA0101613 specifically states: *"This permit only authorizes the discharge from the outfall listed in Part I.A.1 of this permit. Discharges from CSOs are authorized by NPDES permit MA010331."* Yet, NPDES permit MA010331 does not identify 042 as a CSO.

   The regulatory basis in the draft permit provided in the Fact Sheet on page 27 of 34 is as follows: *"CSO 042, which is the CSO outfall located at the treatment plant, was inadvertently omitted from the list of outfalls from which discharges are authorized by the existing CSO permit. It is incorporated here for completeness.*"

This Fact Sheet basis to support the regulatory change is clearly insufficient and fails to address the following:

- The permitting history of 042 needs to be clearly identified from the earliest permit where 042 was first identified to present time. The history needs to include how 042 was identified in each historical permit (i.e. as a bypass), the method SWSC was required to use to report

each use (EPA Bypass Provisions), and all previous written communication EPA, MassDEP and SWSC had in regard to the bypass. EPA needs to define the legal basis of status change of this outfall.

- EPA needs to provide an adequate and defensible basis and background detailing the regulatory basis for the reclassification of this outfall. Simply stating that it was reclassified "for completeness" is insufficient. The EPA Permit Writers Manual Section 11.2 states that a Fact Sheet shall provide a basis to substantiate permit decisions and provide a sound basis for the derivation of permit terms, conditions, and limitations if challenges are made. Clearly, the Fact Sheet in this circumstance has failed to do so.

b) Outfall 042 Does Not Meet the EPA Definition of a CSO: CSOs are defined in the National CSO Policy, Section 1.A:

"A CSO is the discharge from a CSS at a point prior to the POTW Treatment Plant."

The term CSS is defined in this same document: *"A combined sewer system (CSS) is a wastewater collection system owned by a State or municipality (as defined by section 502(4) of the CWA) which conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and storm water through a single-pipe system to a Publicly Owned Treatment Works (POTW) Treatment Plant (as defined in 40 CFR 403.3(p)).*"

As shown in the Attachment A "Plant Flow Diagram," combined flows from the City of Springfield and customer communities enter the POTW Plant Inlet Structure, where preliminary mixing occurs prior to the 042 emergency plant bypass. Inasmuch as overflow 042 is clearly not "at a point prior to the POTW Treatment Plant" but is, in fact, after flows enter the POTW Treatment Plant Influent Structure, overflow 042 is correctly identified as an emergency plant overflow, and not a CSO. In addition, Emergency Bypass 042 acts as a "plant protection line" during high flows, to prevent overloading of the treatment plant.

c) EPA Recognizes 042 as an Emergency Plant Bypass: EPA currently, and historically, recognizes outfall 042 as a POTW emergency bypass and not as a CSO. Since issuance of SWSC's current NPDES permit in 2001, the SWSC has notified the EPA of each and every use of outfall 042, in accordance with the emergency plant bypass procedures at Part II, B.4(b) of its current permit, which would not be required if the overflow were a CSO. EPA never responded to SWSC that the Emergency Bypass Notifications were not necessary (which would be the case if EPA viewed the bypass a CSO).

At no time did EPA notify the SWSC that reporting of emergency bypass 042 was not necessary, as would be the case for a CSO.

d) Identification of 042 as an Emergency Plant Bypass in the Long Term Control Plan (LTCP) and Integrated Wastewater Plan (IWP): On May 30, 2012, the SWSC submitted to the EPA Region 1 a LTCP developed in coordination with both EPA and the Massachusetts Department of Environmental Protection (MassDEP). This IWP has subsequently been reviewed by EPA, and EPA determined the submittal met all regulatory requirements.

The IWP clearly identifies 042 as a plant emergency bypass. The IWP never identifies 042 as a CSO, and in fact, the IWP provides a detailed plan for addressing the plant overflow leading toward reduction of overflows based on the typical year model.

Section 6.8.4.4 of the IWP states: "The selected SRWTF alternative is Alternative 3 with an estimated capital cost of $2,010,000. This alternative provides the most cost effective solution for controlling discharges at Bypass 042 in conjunction with implementation of a collection system hybrid alternative. Alternative 3 requires the incoming flow to the SRWTF to be limited to 180 MGD, and utilization of step-feed mode during storm events. This creates a potential need for a wastewater storage facility at the SRWTF if flows to the facility cannot be limited upstream of the river crossing."

Section 2.2 page 2-3 of the IWP states: *"It should be noted that the overflow at the SRWTF is designed as Bypass 042 and is not considered part of the CSO regulator system."*

In addition to the above two noted circumstances, the 042 emergency bypass is referred to as a <u>bypass</u> separate and distinct from CSO identification an additional 29 times throughout the IWP.

Since the SWSC's ultimate goal is to reduce the use of the emergency bypass as determined on a typical year (except for extreme events that would quality for an affirmative defense) by limiting flows to the plant to 180 MGD, and is committed to the understanding that the cost involved will be in excess of $2M, there is no environmental, regulatory, or economical advantage for EPA to re-classify this outfall as a CSO.

Furthermore, at this time SWSC is not requesting that flows through 042 be authorized (as they would be under the CSO permit), as such a request would only perpetuate the use of 042 far into the future, with less regulatory oversight than currently is the case as an unauthorized bypass.

While SWSC recognizes that identification as a CSO involves alternative compliance requirements than a plant bypass, since SWSC's ultimate goal is to limit flows to the plant under 180 MGD at this time (the ultimate wet-weather capacity of the headworks and primary clarifiers), in which case expenditures associated with classifying 042 as a CSO would be no longer be necessary, these alternative compliance requirements would not represent an appropriate expenditure and use of ratepayer funds.

<u>Request:</u> SWSC requests that the final permit continue to identify 042 as an emergency plant bypass, and that all sections of the permit and the administrative record be revised as such including but not limited to all sections of the permit that refer to 24 CSOs (revise to 23). The Fact Sheet pages 2 and 27 of 34 also references 24 CSOs, and on page 5 of 34 the Fact Sheet references 25 CSOs. Please revise the permit and the administrative record to reflect 23 CSOs.

Response 3

In developing the draft permit, EPA applied the definition of a CSO in determining the classification of outfall 042. A CSO is defined in Part I.A. of the National CSO Policy as "a discharge from a combined sewer system at a point prior to the POTW Treatment Plant." See

the *National CSO Control Policy*, 59 Fed. Reg. 18688 (1994). "POTW Treatment Plant" is defined as "that portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste" (see 40 CFR §404.3(r)). EPA Guidance additionally defines a CSO as "the portion of flow from a CSS which discharges into a water body from an outfall located upstream of the headworks of a POTW." *Combined Sewer Overflows – Guidance for Long-Term Control Plan*, EPA (September 1995).

A CSO-related bypass, on the other hand, is clearly a discharge that occurs after receiving at least primary treatment. "The CSO-related bypass provision in the permit should also make clear that all wet weather flows passing the headworks of the POTW treatment plant will receive at least primary clarification and solids and floatables removal and disposal, disinfection, where necessary, and any other treatment that can reasonably be provided." *National CSO Policy at* 18693. *See also CSO Permit Writers Guidance*, EPA (1995) ("The CSO Control Policy recommends that the permit require all wet weather flows passing the headworks of the POTW treatment plant to receive at least primary clarification, solids and floatables removal and disposal, disinfection (where necessary), and any other treatment that can reasonably be provided.")

As stated in the above comment, influent flows from Springfield and the customer communities enter the inlet structure where they are comingled (i.e., "mixed") to form a single waste stream just upstream of outfall 042. The inlet structure is located before the "headworks" of the treatment plant, which is located on the other side of a parking lot. The headworks contains the initial treatment of the waste stream. *See Cent. Weber Sewer Imp. Dist. v. Ace Fire Underwriters Ins. Co., 2014 WL 495152, at *1 (D. Utah 2014)* ("The headworks of a wastewater treatment plant is the initial stage of a complex process to reduce the level of pollutants in the incoming domestic and industrial wastewater to a level that will allow the treated wastewater or effluent to be discharged into a stream, river, or lake. The function of the headworks is to remove inorganics such as sticks, stones, grit, and sand from the wastewater stream to protect and reduce wear on the downstream process equipment.") No treatment of the waste stream occurs at the inlet structure prior to flows discharging from outfall 042. As the Permittee notes in its comment, there is not even separation of solids and floatables before outfall 042. Mixing of waste streams alone is not considered a form of treatment.

Since the inlet structure was not designed to nor does it provide any treatment, and it occurs before the headworks of the WWTP, discharges from outfall 042 at the inlet structure are appropriately considered CSOs. This classification remains unchanged in the Final Permit.

Contrary to the above comment, SWSC, and not EPA, identifies outfall 042 as an emergency plant bypass in both the LTCP and Integrated Wastewater Plan (IWP). Although the IWP, which incorporates the 2012 LTCP, has been reviewed by EPA, it has not been approved.

EPA acknowledges that it has not consistently permitted outfall 042 as a CSO. In the 1995 permit, NPDES No. MA01101613, the permit labeled 042 as a "bypass." The 2000 permit does not address outfall 042 at all. The 2009 CSO permit labelled 042 as "an unauthorized

bypass of the wastewater treatment plant." That prior permits incorrectly characterized 042 as a bypass or did not address it at all does not preclude the Agency from now correctly characterizing it as a CSO based on a detailed and explicit rationale of the application of EPA regulations and guidance, as provided here and in the Fact Sheet. *See FCC v. Fox Television*, 556 U.S. 502, 515 (2009) (holding that an agency may change a position so long as it provides a reasoned explanation for its action and displays an awareness that it is changing its position); *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016) ("Agencies are free to change their existing policies as long as they provide a reasoned explanation for the change"). In light of efforts made by EPA's Enforcement and Compliance Assurance Division ("ECAD") and the City, EPA now has significantly more information regarding the WWTF and its operations, for example as enshrined in the City's IWP and High Flow Wet Weather Management Standard Operating Procedure, than it did in prior permitting cycles. This information has helped inform EPA's understanding of outfall 042.

Additionally, when changing positions in circumstances where there may have been 'serious reliance interests' on the previous position, an agency must also present a "reasoned explanation" for "why it deemed it necessary to overrule its previous position." *Encino* 136 S. Ct. at 2126. Although EPA acknowledges that the Permittee may have relied on EPA's prior erroneous determination of Outfall 042 as a bypass, EPA does not assess that reliance interest as significant as this prior approach did not require the Permittee to make infrastructure investments at 042 that will be negated by this change. Further, the Permittee was required to ensure that discharges from 042 did not cause or contribute to an exceedance of WQS whether it was a bypass or CSO. In any case, EPA's reasoning in the Fact Sheet and supplemented here demonstrate that EPA's determination that Outfall 042 is a CSO is based on sound legal and scientific analyses.

EPA notes that Page 5 of the Fact Sheet which accompanied the 2017 Draft Permit incorrectly referenced 25 CSOs. This reference should have been to the SWSC's 24 CSOs. This correction is noted herein for incorporation into the administrative record.

Comment 4

<u>Public Notification Plan</u>: The draft permit Part B.f. contains new, detailed requirements for SWSC to install and maintain signs at all CSO outfall structures, specifying the exact size, color, languages, and wording of the signs. In addition, the draft permit requires SWSC to develop a public notification plan and specifies that SWSC has to provide notification of every CSO discharge when it occurs, and when it ends, both electronically to interested parties and on its website. The information to be provided includes volume of the CSO discharge.

SWSC objects to these new requirements, which will result in substantial added costs to SWSC and its ratepayers without any added protection for public health, and requests that EPA provide us the legal authority to specify these requirements. Under the National CSO Policy, EPA provides that one of the Nine Minimum Controls (NMCs) is *"public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts."* SWSC has a plan currently that provides that notification, and EPA has never made any determination that the current plan does not meet the CSO policy requirements. The new requirements in the draft permit go well beyond the NMC provision, and should be deleted from the draft permit.

The above notwithstanding, SWSC offers the following specific comments:

a) Public Notification Plan Contents: The draft permit requires that:

"As part of this plan, notification shall be provided electronically to any interested party, and a posting made on the Permittee's website, of a probable CSO activation within 24 hours of the initiation of any CSO discharge(s)."

Furthermore:

"Subsequently, within 24 hours of the termination of any CSO discharge(s), the Permittee shall provide the following on their website and in a follow-up electronic communication to any interested party: CSO number and location, Confirmation of CSO discharge, Total volume discharged from the CSO, and Date, start time and stop time of the CSO discharge."

These requirements are excessive, go far beyond EPA's published requirements, and are costly, and the requirement to monitor flow volume is simply not consistently implementable.

In EPA's Combined Sewer Overflows Guidance for Nine Minimum Controls, Chapter Nine contains specific guidance for the implementation of this NMC measure, as follows:

- Section 1-7 specifically states that, *"The NMC are controls that…do not require significant engineering studies or major construction, and can be implemented in a relatively short period…"*
- Section 9-1: *"The intent of the eighth minimum control, public notification, is to inform the public of the location of the CSO outfalls, the actual occurrences at CSOs, the possible health and environmental effects of CSOs, and the recreational and commercial activities…curtailed as a result of CSOs."*

No meaningful interpretation of this language would conclude flow volume or duration should be required. Further, as detailed in comment #9 below, flow measurement of volume and duration is not feasible to implement for the purposes of CSO reporting.

- EPA NMC guidance provides specific examples of control measures under public notification which are:

    - Posting at affected use areas (SWSC will consider this in the plan)
    - Posting at selected public places (SWSC will consider this in the plan)
    - Posting at CSO outfalls (SWSC has completed this)
    - Notices in newspapers, radio, TV news programs, letters to residents, telephone hotline (SWSC is proposing a website notification described further below)

The requirements of flow duration, and starting and stopping times, go far beyond any controls EPA considered in the NMC guidance. These requirements are, in fact, IWP characterization

requirements, not appropriate for inclusion in a NMC public notification plan. SWSC strongly objects to their inclusion as part of the public notification plan.

As part of our public notification plan, SWSC is considering, the development of a website to provide predicative CSO activation notification to the public. This website would provide 24/7 notification to the public regarding which CSOs are active. CSO notifications and updating of the website would be accomplished electronically with the use of a model and rainfall measurement. By use of the model with automatic, electronic website updating, the public can access immediate and meaningful information regarding the status of the SWSC CSO discharges into the Connecticut River, Chicopee River, and Mill River, and may then make appropriate decisions regarding access to the waterbodies at that time.

This system has been successfully implemented in a number of CSO communities outside of Massachusetts, and has been favorably received by the public, environmental groups and regulated entities.

b) Public Notification Plan Submittal Deadlines: The draft permit requires the submission to EPA of a public notification plan within 90 days of the effective date of the permit, and implementation within six months of the effective date of the permit.

SWSC considers the development of a meaningful public notification plan to be one of our highest priorities. Not only will the SWSC develop a plan that meets the requirements of the National CSO Policy and NMC guidance documents, but SWSC intends to solicit input from the City of Springfield and the surrounding communities in the six co-permittee municipalities. A public notification plan will only be meaningful to the extent that it addresses the needs of the community.

Further, so as to not unnecessarily delay implementation of the public notification plan, SWSC requests that development of the plan and implementation be combined into one activity, as was previously approved by EPA. In this example, all New Jersey CSO owners and appropriate communities (210 CSOs within 26 communities) are required to develop and implement a public notification plan within 36 months of the effective date of their permit. The public notification plan has been re-named the public notification report, to reflect that at the time of submittal of the report (36 months from the effective date of the permit) the public notification plan will already be implemented, and the report can include a discussion of the current operations, public comments and ability to meet the needs of the community.

In order to provide the necessary time to develop a meaningful plan, solicit appropriate input, determine the content and extent of appropriate notification, develop a web-based notification system that integrates the use of our existing model with four strategically located rain gauges, evaluate public posted signs and need for additional public postings, plus other contents of a meaningful public notification plan, SWSC requests that the submittal requirements of this permit reflect the submittal requirements approved under EPA Regions II – namely submittal of a public notification report within 36 months from the effective date of the permit.

Response 4

EPA disagrees with commenter's assertion that the signage provisions in Part I.B.4. of the revised Draft Permit are new. The requirements for the Permittee to install and maintain identification signs for all CSO outfall structures was carried forward from Part I.A.2.e of NPDES Permit No. MA010331 (issued in 2009 to the SWSC and authorizing the discharges from the SWSC's CSO outfalls), and incorporated into the Draft Permit, and therefore are not "new." As the commenter has provided no explanation as to why these signage requirements are unwarranted, unreasonable or impractical, the signage requirements are unchanged in the Final Permit.

The commenter provides a list of examples of public notification control measures contained in EPA's 1995 Guidance for Nine Minimum Controls. This list, however, is merely examples of "potential" controls and not an exhaustive catalogue of controls that a permitting authority may require. NMC Guidance at 9-1. As that Guidance states, "[t]he most appropriate mechanism for public notification will probably vary with local circumstances, such as the character and size of the use area and means of public access." *Id*. Accordingly, EPA is not bound by the list of example controls provided in the NMC Guidance. EPA has determined, based on the unique circumstances of the Permittee's CSO discharges and the receiving waters, that retaining the public notification provisions that were contained in the previous permit is appropriate.

Other than the signage requirements, this comment refers to public notification requirements from the 2017 Draft Permit which were amended in the 2018 Draft Permit or on which the commenter commented on again in 2018. Therefore, responses to comments regarding other public notification plan contents and submittal deadlines are found in Response 42 and 43.

Comment 5

Annual CSO Report: draft permit, page 13 of 24, Section I.B.4, it states: *"The Permittee shall submit a report summarizing the activities during the previous calendar year relating to compliance with the nine minimum controls including the required information on the number of activations for each CSO as well as the volume of each discharge from each CSO."*

The SWSC objects to the inclusion of this requirement for the following reasons:

- As discussed in further detail under comment #9 below, "Quantification of CSO Discharges," the requirement to report the volume of CSO discharge is beyond the regulatory scope of the NMCs, and therefore has no regulatory basis to be included in this permit.

- The number of activations of each CSO will already be reported monthly on each DMR.

- CSO and related inspection records can be kept onsite and inspected by EPA and MassDEP at any time, or submitted at any time.

- All dry-weather overflows (DWO) are already reported to EPA within 24 hours of SWSC becoming aware of an occurrence.

- SWSC has requested a timeline for the submittal of the public notification plan. SWSC anticipates that progress reports will be associated with this timeline.

Inasmuch as the above "activities during the previous calendar year relating to compliance with the nine minimum controls" are satisfactorily addressed without the submission of an additional annual report, SWSC requests this report requirement be eliminated.

Request: Remove requirement I.B.4 Annual CSO Report from the draft permit.

Response 5

The commenter's argument that the requirement to report the volume of CSO discharge is beyond the regulatory scope of the NMCs, and therefore has no regulatory basis to be included in this permit, is unfounded. The Annual Report shall be a comprehensive summary made up of several elements, including a summary of all activities undertaken during the calendar year that demonstrate compliance with the Nine Minimum Controls, and a well as a summary of the CSO discharge and precipitation data that were collected in accordance with Part I.B.5. of the permit. The summaries contained in the annual report will provide information that is necessary for regulators to evaluate the operation of the collection system during wet weather as well as to evaluating compliance with the Nine Minimum Controls (specifically, NMC #2 (maximum use of the collection system for storage), #4 (maximization of flow to the POTW) and #9 (monitoring to effectively characterize CSO impacts and the efficacy of CSO controls)) and overall compliance with the CSO-related requirements of permit. (CSO control policy, Part II.C.1., p. 18691. The annual report will also provide localized information relative to the conditions that result in discharges from individual CSOs). These reporting requirements are not new, and have been carried over from NPDES Permit No. MA010331. The requirement to submit this useful compendium of CSO-related information is well within the Agency's "broad authority to impose monitoring requirements on any point source." the Act "confers broad authority on the Agency to impose monitoring requirements on any point source." *In re: Town of Concord Department of Public Works*, 2014 WL 4310902, at *24 (EAB 2014).

Information that the Permittee has collected in accordance with other permit requirements may be used and summarized in the Annual CSO Report. The Annual CSO Reporting requirement in Part I.B.4 of the Final Permit remains unchanged from the Draft Permit.

Comment 6

<u>Solids and Floatables Removal</u>: Solids and floatable removal is required in permit sections Part I.B.2 (6) (page 10 of 24) and Part I.B.3.C (page 11 of 24). Should EPA continue to classify outfall 042 as a CSO, SWSC will require sufficient time to install this technology.

Request: A timeline must be provided to SWSC to allow three years from the effective date of the permit to provide sufficient time to install solids and floatables control on any newly defined CSOs (i.e., outfall 042, should EPA continue to classify it as a CSO).

Response 6

Due to the inherent nature of combined wastewater, which often contains solids and floatable materials, the Draft and Final Permits impose a requirement to control, rather than remove, solid and floatable materials in CSOs (see specifically Part I.B.2.a.6. (NMC #3 - Control of solid and floatable materials in CSOs)) of the Draft Permit. , EPA believes that one year us a reasonable amount of time to install basic controls such as baffles, screens and racks. Therefore, Part I.H., Special Conditions, of the Final Permit has been revised to allow the Permittee up to one year from the effective date of the permit to comply with Part I.B.2.a.(6). (Control of Solids and floatable materials in CSOs) of the Final Permit as is it applies to outfall 042. Should the Permittee encounter unanticipated difficulties in timely complying with this requirement, it may contact EPA's ECAD to discuss compliance assistance.

It is unclear from the above comment how inadequate solids and floatables controls at outfall 042 would preclude the Permittee from complying with the requirements of Part I.B.3.c. of the Draft Permit, which prohibits discharges to the combined wastewater collection system of septage, holding tank wastes, or other material which may cause a visible oil sheen or containing floatable material, during wet weather when CSO discharges may be active. Therefore, Part I.B.3.c. of the Final Permit remains unchanged from the Draft Permit.

Comment 7

NMC Documentation: In section I.B.3.a, the permit states: *"The Permittee must implement the nine minimum controls in accordance with the documentation provided to EPA and MassDEP or as subsequently modified to enhance the effectiveness of the controls. This implementation must include the following controls plus other controls the Permittee can reasonably undertake as set forth in the documentation."*

SWSC understands that as a CSO permittee, it must comply with the NMC requirements of the National CSO Policy. However, the draft permit states that requirement in a way that improperly adds to what is required under the policy.

The parts that are underlined above have no legal authority. The NMC are clearly laid out in the CSO policy, but here EPA appears to be adding to them, and to be doing so in a vague way, leaving SWSC to guess at what additional steps are required to comply. The first underlined term, "or as subsequently modified to enhance the effectiveness of the controls," seems to imply that SWSC has some obligation to "enhance the effectiveness" of the steps that it is taking to meet the NMCs. Beyond the fact that "enhance the effectiveness" is a vague term that is defined nowhere in the permit or in EPA regulations or guidance, EPA has no authority to require this. Similarly, the concept of "other controls the Permittee can reasonably undertake" is completely undefined and vague, and EPA has no legal authority to require SWSC to take any such steps. Both of the underlined clauses should be deleted from the permit language.

SWSC requests that EPA provide a description of "the documentation provided to the EPA and MassDEP." Once this documentaiton is identified, the SWSC requires an opportunity to review the contents and determine whether implementation of the NMCs is appropriate and feasible with respect to its contents.

The second sentence of paragraph 3.a. states: *"must include the following controls…"* Please note that there are no additional items following this statement, or as a subset of Part 3.a.

Finally, SWSC cannot agree to implement the NMCs in accordance with documentation that may be "subsequetly modified" (in documentation which is yet to be identified). SWSC is not in a position to confirm, prior to having the opportunity to review any future modifications, that the modifications are feasible, attainable or technically appropriate.

Request: SWSC requests that EPA delete the underlined clauses in this language ("or as subsequently modified to enhance the effectiveness of the controls" and "plus other controls the Permittee can reasonably undertake"). Please specifically identify the "documentation provided to EPA and MassDEP," and identify "the following controls" or remove the sentence; allow SWSC an opportunity to examine and comment on "the documentation provided to EPA and MassDEP" prior to its inclusion in a final permit; remove references to compliance with future (unseen) modifications.

Response 7

The National CSO Control Policy, which was adopted into the CWA, clearly establishes the nine minimum controls as the required technology-based limitations for CSOs and establishes that documentation produced by the permittee shall be the basis for determining the appropriate implementation level of the controls.

The "documentation" referenced in Part I.B.3.a. of the 2017 Draft Permit refers to the SWSC's *NMC Program* (April 1997 and updated April 2010)[41], which describes how the Nine Minimum Controls are to be implemented. For clarification, EPA notes that the Permittee has submitted documentation of the implementation of the NMCs, in accordance with NPDES Permit No. MA0103331 (the "2009 CSO permit"), and not the NMC program itself, as submittal of the NMC program was not a permit requirement. Therefore, EPA acknowledges that documentation of the implementation of the NMCs has been submitted and is under review by EPA and MassDEP.

[41] Should the Permittee wish to review their NMC program, EPA directs them to the NMC Program that was referenced in the Annual CSO and CMOM Report, dated March 2018, that was submitted by the SWSC to EPA. Specifically, Section 1.1 of the report states: "*This report is intended to meet the CSO-related reporting requirements in the SWSC's NPDES Permit….*" "*In addition, the report documents the on-going implementation of the SWSC's NMC's program…. The NMC program consists of appropriate and cost-effective best management practices that make up the EPA-specified NMCs, which have been integrated into the SWSC's CSO Control Program*". Further, Section 1.2., Regulatory Background, cites the "*SWSC's NMC Program Document, April 1997 and updated April 2010*".

Given the intent of the CSO Control Policy, which includes bringing permittees with CSOs into compliance with CWA goals by applying a flexible approach to CSO control through NPDES permitting, EPA anticipated that modification of SWSC's NMC program may be necessary to reflect current conditions and to determine whether it remains appropriate. This is reflected in the language in Part I.B.3.a. of the Draft and Final Permits, which is structured in such as way so as to allow for an adaptive approach to be taken towards implementation of the NMCs as continued progress is made towards achieving the CSO controls identified in the LTCP, particularly in the event that such controls are deemed unfeasible or if alternative controls are identified which would result in greater reductions in CSO discharges than those which were originally selected. Subsequent modifications of the Permittee's program to implement the NMCs would be made by the Permittee and submitted to EPA and MassDEP. This approach recognizes the Permittee's understanding of its own processes and how to best implement the NMCs, including adjustments that may be necessary during the permit term. Likewise, the language regarding "other controls" references measures the Permittee identifies as appropriate for implementing the NMCs. Thus, the language underlined and objected to by the commenter above will remain in the permit as it is consistent with and derived from the CSO Policy itself, it does not add any additional "minimum controls," and provides the Permittee with appropriate flexibility to implement the NMCs in accordance with its expertise and knowledge of its facility.

The second sentence in paragraph three of Part I.B.3.a. of the Draft Permit, which states "must include the following controls" has been clarified in the Final Permit to read as "must include the controls identified in Part I.B.3."

The nine minimum controls are outlined in 40 CFR Part 122. Section I.B.3.a merely states that if the nine minimum controls in 40 CFR Part 122 are modified (through proper rulemaking procedures), then the SWSC will be subject to the modified provisions in 40 CFR Part 122. Any other controls that the SWSC may implement are discretionary. EPA notes that the nine minimum controls are, by definition, minimum control measures that may be expanded upon from permit to permit.

Comment 8

Monthly Inspection Requirement: In section I.B.3.b, the permit requires that each CSO structure/regulator, pumping station, and/or tide gate be inspected at least monthly to ensure they are in good working condition and adjusted to minimize combined sewer discharges.

The following concerns are noted:

a) Not all of the items noted above are accessible. For example, some of the outfalls are submerged, and some of the regulators are not accessible.

b) "Adjusted to minimize combined sewer discharges" is vague language and not implementable. How would this level be determined? Also, there are circumstances when flows discharged from the CSO should not be minimized, such as a downstream sewer break, equipment failure, severe weather that would otherwise cause backups in the system, times when flow to the SRWTF must be limited, or other such occurrences when the ability to discharge increased flows through a

CSO is necessary in order to protect human health and prevent upstream SSOs and back-ups into homes and businesses.

Request: SWSC requests that the inspection requirement section be modified as follows: "To the extent feasible, each accessible CSO structure/regulator, pumping station, and/or tidegate shall be routinely inspected, at a minimum of once per month, to insure that they are in good working condition and adjusted so as to perform at the level and function intended."

Response 8

With the exception of the inspection frequency, the requirements in Part I.B.3.b. of the Draft Permit which pertain to inspections of each CSO structure, regulator, pumping station and/or tidegate, are identical to those contained in Part I.A.2.a. of NPDES Permit No. MA0103331 (which has been incorporated into NPDES Permit No. MA0101613). As such, inspections of such structures should have been occurring on a regular basis in accordance with NPDES Permit No. MA010331. To date, EPA has not been made aware of any conditions which would preclude SWSC from conducting these inspections. This fact notwithstanding, the language in Part I.B.3.b. of the Final Permit has been modified to read as (note, modified language in italics): "Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected, at a minimum of once per month, to ensure that they are in good working condition and adjusted to minimize combined sewer discharges (NMC # 1, 2 and 4). *For any structure that is inaccessible, a description of the conditions which preclude the inspection from taking place shall be recorded and shall be included with the annual inspection certification that is sent to EPA and MassDEP*, as required by this section…"

With respect to the Permittee's concern regarding the provision in Part I.B.3. which requires Each CSO structure/regulator, pumping station and/or tidegate to be "...adjusted to minimize combined sewer discharges", the Permittee should include in its inspection documentation a description of any measures taken to ensure that CSO discharges are minimized. The commenter's suggestion that "adjusted to minimize combined sewer discharges" be replace with "so as to perform at the level and function intended" would create more ambiguity as it would remove the stated intention of the CSO control system which is to minimize CSOs.

Comment 9

Quantification of Discharges through CSOs: Section I.B.3.e. of the draft permit contains specific records which must be kept regarding quantifying the flows from all CSOs, including hours of discharge, volume in gallons of discharge, National Weather Service precipitation data, and cumulative precipitation per discharge event.

The following comments are offered:

a) SWSC objects to the extensive and over-reaching nature of EPA's determination of NMC number 9: "Monitoring to effectively characterize CSO impact and the efficacy of CSO controls."

While recording CSO events is necessary to comply with the NMC policy, additional data collection such as hours of discharge, volume of discharge, and the National Weather Service precipitation data will result in excessive costs to SWSC, and are requirements that go far beyond those necessary to comply with the NMC, which EPA has repeatedly qualified as "low cost measures."

Section 1-7 of the NMC guidance document specifically states that, *"The NMC are controls that…do not require significant engineering studies or major construction, and can be implemented in a relatively short period…"*
While EPA may have required the extensive monitoring in this draft permit with the mistaken assumption of continuous flow metering being present, please know that flow meters currently installed in the Springfield collection system are temporary in nature, and are used solely to characterize flows throughout the system to inform and calibrate the models used for the IWP implementation. EPA recognizes that flow metering is a component of the IWP characterization, and not a requirement of the NMC (see NMC guidance document page 10-1: *"This minimum control is the precursor to the more extensive characterization and monitoring efforts conducted as part of the LTCP…"*)

The placement of these flows meters was not intended to accurately measure each and every overflow event at each of the individual 23 CSO locations, but rather their placement was specific to the modeling and analysis required under the IWP. The contract covering the use of the flow meters will expire October 2020, and most of the flow meters are anticipated to be removed at that time.

Since flow metering within the Springfield system will be shortly discontinued, and the continued use of flow meters would be an excessive and burdensome cost, SWSC requests that CSO monitoring be required in the manner that is prescribed in the NMC guidance document.

Specifically, EPA guidance as detailed in the NMC guidance document prescribes the following levels of monitoring as being in compliance with the National CSO Policy:

- Page 10-1: *"The ninth minimum control involves visual inspection and other simple methods to determine the occurrence and apparent impacts of CSOs."*

- Page 10-2: *"The municipality should record the number of CSO overflows at as many outfalls as feasible…Large systems should work with the NPDES permitting authority to select a percentage of outfalls that represent the entire drainage area and sensitive locations."*

- Page 10-2: *"Monitoring of flow and quality at the level necessary to calibrate models and/or estimate pollutant loadings is addressed in EPA's…'Combined Sewer Overflows-Guidance for Long Term Control Plan' and may be <u>beyond the intended scope of minimum control monitoring."</u> (emphasis added).*

- Page 10-2: *"In cases where a calibrated model of the CSS exists (or when one becomes available) model projections may be used to determine the frequency and location of overflow events."*

- Page 10-3 *"The following measures can be applied to detect overflows;…visual inspection…a chalk mark…wood blocks...mechanical counting device…"*

Request: SWSC has developed a model to predict CSO overflow events with respect to rainfall. In accordance with the above EPA guidance, SWSC requests that CSO events (see definition of event below) be recorded on DMR submittals in accordance with the model predictions. In the event that model predictions are no longer acceptable to EPA, SWSC requests the option to use a variety of CSO activation recordings such as the EPA-approved methods of wood blocks, chalk lines, and mechanical counting devices, as well as any flow meters that may be available.

b) In addition to the above comments, this section of the draft permit also requires that *"cumulative precipitation per discharge event shall be calculated."*

SWSC requests that EPA define the term "event." SWSC suggests that language previously approved by EPA be used:

> *In a hydraulically connected system that contains more than one CSO outfall, multiple periods of overflow from one or more outfalls are considered one overflow event if the time between periods of overflow is no more than 24 hours without a discharge from any outfall.*

Request: Define "event" using the above-noted EPA definition.

c) SWSC presently has four rain gauges, which are electronically connected to the SWSC, located within critical areas of the combined sewer system. The nearest National Weather Service (NWS) rain gauge is located more than 20 miles away from the combined sewer service area. It does not represent precipitation conditions in the combined sewer service area, especially during summer thunderstorm events, where the NWS station could record no rain while a localized high intensity thunderstorm event in the combined sewer service area could cause CSOs activation at multiple locations. SWSC requests that SWSC's rain gauges be approved for the use of calculated cumulative precipitation.

Request: Allow the use of SWSC current rain gauges to calculate cumulative precipitation.

Response 9

Chapter 10 of the Nine Minimum Control Guidance, Monitoring to Characterize CSO Impacts and the efficacy of CSO Controls, discusses the implementation of NMC #9 (Monitoring to effectively characterize CSO impact and the efficacy of CSO controls) (*Combined Sewer Overflows Guidance for Nine Minimum Controls*, EPA May 1995 [EPA 832-B-95-003]). This discussion states that this minimum control is a starting point and that extensive monitoring be conducted as part of the LTCP. The minimum control should

develop information on the frequency of overflows at individual points in the system. The Guidance recommends the gathering of basic data, such as date and time of overflow events, total daily rainfall, as well as information regarding the duration and magnitude of overflow events, as this information can enhance the implementation of CSO controls and can enable measurement of the effectiveness of particular control measures.

It is unclear from the above comment how the requirement in Part I.B.3.e. of the Draft Permit to report hours of discharge, volume of discharge, and National Weather Service precipitation data will result in excessive costs to SWSC, as this is already being implemented in accordance with the NPDES permit that was issued to the Permittee in 2005.

See also Response 43 below for discussion of comments regarding direct monitoring.

In recognition of the need for additional time to validate and refine CSO data that is collected through direct measurement, the requirement to report CSO discharge data with monthly DMRs has been removed from Part I.B.5. of the Final Permit. This data shall be included in the Annual Report that is submitted in accordance with Part I.B.4. EPA notes that CSO annual reports shall be submitted as NetDMR attachments. The Final Permit has been modified to reflect these changes.

With regard to the request to define "event," EPA's Combined Sewer Overflows Guidance for Permit Writers (1995) contains the following definitions:

"**Combined Sewer Overflow Event** - The discharges from any number of points in the combined sewer system resulting from a single wet weather event that do not receive minimum treatment (i.e., primary clarification, solids disposal, and disinfection, where appropriate). For example, if a storm occurs that results in untreated overflows from 50 different CSO outfalls within the CSS, this is considered one overflow event."

"**Precipitation Event** - An occurrence of rain, snow, sleet, hail, or other form of precipitation. Precipitation events are generally characterized by parameters of duration and intensity (inches or millimeters per unit of time). This definition will be highly site-specific. For example, a precipitation event could be defined as 0.25 inches or more of precipitation in the form of rain or 3 inches or more of precipitation in the form of sleet or snow, reported during the preceding 24-hour period at a specific gaging station. A precipitation event could also be defined by a minimum time interval between measurable amounts of precipitation (e.g., 6 hours between the end of rainfall and the beginning of the next rainfall)."

The SWSC may submit additional information to EPA (i.e., such as information regarding the time it takes for storm-related flows to pass through the collection system and treatment facility) to consider for including specific time frames in the above definitions.

CSO Guidance for Permit Writers at G-1. Additionally, the CSO Policy states "an overflow event is one or more overflows from a CSS as the result of a precipitation event that does not receive the minimum treatment specified [in the Policy]." 59 Fed. Reg. at 18692.

Accordingly, in order to provide further clarification, a "discharge event" has been defined in Part I.B.3.e. of the Final Permit as "The discharges from any number of points in the combined sewer system resulting from a single wet weather event that do not receive minimum treatment (i.e., primary clarification, solids disposal, and disinfection, where appropriate)." "Precipitation-related" includes rainfall, snowfall, and snow melt. This is consistent with the CSO Policy, which states that it applies "to all CSSs that overflow as a result of storm water flow, including snow melt runoff (40 CFR Section 122.26(b)(13))."

EPA agrees that the SWSC's rain gages are appropriate for determining cumulative precipitation. All references to the National Weather Service rain gages have been replaced with "SWSC rain gages" in the Final Permit.

Comment 10

Prohibition of DWO: In section I.B.3.d, the permit states: "Dry weather overflows (DWOs) are prohibited (NMC #5)…"

While this section does not define "dry weather," the draft permit Part I.A.1.(e) defines dry weather: *"Dry weather is defined as any calendar day on which there is less than 0.1 inch of rain and snow melt."*

It is not uncommon for a CSO to discharge with 0.1 inches of rain, depending on the intensity of the storm, and the location of the rain measurement gauge in relationship to the CSO discharge. SWSC objects to this definition of dry weather, particularly since the measurement of snow melt is not clearly defined or determined. It may be that during a sunny, warm winter day, a significant amount of snow melt could trigger a CSO discharge.

SWSC cannot at this time determine that a CSO event would not be triggered by 0.1 inches of rainfall, relative to intensity and duration and in combination with a snow melt event.

Request: SWSC requests that EPA remove the definition of "dry weather" located in Part I.A.1.(e) of the draft permit, to avoid any confusion as it relates to DWOs.

Response 10

Although EPA recognizes that discharges from CSOs are, in part, dependent on storm intensity, and that the proximity of rain gages to the CSO outfalls may or may not indicate the exact rainfall amount which would trigger a CSO discharge, it is necessary to define "dry weather" in the context of a combined collection system, which conveys both sanitary wastewater and stormwater to a POTW.

The CSO Control Policy defines dry weather flow as "flow in a combined sewer that results from domestic sewage, groundwater infiltration, commercial and industrial wastewaters, and any other non-precipitation related flows [e.g., tidal infiltration). [*National CSO Control Policy,* 59 Fed. Reg. 18689 (1994). Precipitation-related includes rainfall, snowfall, and snowmelt (EPA notes that the permit doesn require snowmelt to be measured, only its presence or absence be noted). The definition of dry weather, as defined in Part I.A.1.(e). of

the Draft permit, (i.e., any calendar day on which there is less than 0.1 inches of rain and no snow melt") is consistent with the CSO Control Policy and its implementing regulations. This definition remains unchanged in the Final Permit. To clarify the CSO requirements in Part I.B.3., the same definition has been added to Part I.B.3.d. of the Final Permit.

Comment 11

Address Pump Stations in the Permit: In the current CSO NPDES permit (MA 010331), SWSC notes that five pumping stations are identified in Attachment B as follows:

Discharge No.	Location
030	Liberty Street Pumping Station
031	Canton Circle Pumping Station
032	Carew Street Pumping Station
040	Tiffany Street Pumping Station
050	Indian Orchard Pumping Station

Attachment B states: *"Discharges of wastewater from any other point source, including the pumping stations listed above (Attachment B) are not authorized by this permit and must be reported in accordance with Part II.B.4 (General Requirements – Bypasses) of this permit."*

SWSC notes that the draft permit has eliminated the listing of these five pumping station locations. While SWSC recognizes the inclusion of named bypass locations does not authorize the bypass, and does not provide any additional regulatory relief in the event of a bypass, SWSC requests the named locations remain in the permit to provide a more meaningful understanding of the Springfield collection system and of historic locations of bypasses.

Request: SWSC requests the five named pumping stations be retained in the new, combined NPDES permit. SWSC understands that the prohibition of discharge language will continue to be associated with these locations.

Response 11

The list of pumping stations that was included as Attachment B to NPDES Permit No. MA0103331 that was issued in 2000, was provided for informational purposes. These are not permitted discharges, and as such, have not been included in the Final Permit. However, the above comment, including the list of pump stations, is hereby incorporated into the Administrative Record.

Comment 12

Prohibition of Septage:

a) Prohibition of Acceptance during Secondary Bypass: In the draft permit page 5 of 24, footnote 3 states: *"The Permittee shall not accept septage during any calendar day in which a bypass of secondary treatment is anticipated."*

This is a concern for the following reasons:

SWSC is not aware of any legal, regulatory or plant performance basis to include this requirement in the draft permit. Please provide such a basis so that SWSC can critically examine the need for this requirement.

This represents an absolute prohibition of an activity, based upon the "best guess" of treatment plant operation regarding a future weather event. Meteorologists, who study the weather and are paid to predict the weather, are often incorrect; therefore, the expectation that a treatment plant operator can predict future weather events to the extent that he/she can predict the intensity and duration of a rain event's impact to require secondary bypassing is unreasonable.

The SWSC has reviewed plant performance on wet-weather days when septage is received, and determined that the acceptance of septage does not impact the ability of the SRWTF to meet effluent limitations and maintain compliance with water quality standards. Further, all septage is received at a designated septage receiving facility, where screening and grit removal are performed prior to conveyance to the treatment facility.

The prohibition of septage receiving will create very real environmental challenges in that disruptions to septage receiving schedules and the need to turn away septage haulers has the potential to create an environmental hazard as homeowners and businesses will be unable to have their tanks pumped at critical times, the hauler may not have the ability to store the septage until the plant is able to accept it, and this creates an environment of unpredictability for waste haulers.

Request: Since no regulatory basis has been provided for this requirement; SWSC's plant performance is not impacted by septage during wet-weather events; all septage receives screening and grit removal; and all secondary bypass flows receive screening, grit removal, primary treatment and disinfection, SWSC requests that the language pertaining to the prohibition of acceptance of septage during secondary bypass in footnote 3 be deleted.

b) Prohibition of Septage to the Combined Collection System: Part 3.c, page 11 of 34, states: "Discharges to the combined system of septage, holding tank wastes, or other material which may cause a visible oil sheen or containing floatable material are prohibited during wet weather when CSO discharges may be active."

Since wastewater (separate as well as combined) typically contains floatable material, SWSC objects to the inclusion of "or containing floatable material" in this section. Such a permit requirement is unreasonable as there is no way to practically manage such discharges into the combined systems through sanitary sewer connections.

Request: Since no regulatory basis has been provided for this requirement; SWSC's plant performance is not impacted by septage during wet-weather events; all septage receives screening and grit removal; and all secondary bypass flows receive screening, grit removal, primary treatment and disinfection, SWSC requests that the language pertaining to the prohibition of septage to the combined collection system be deleted.

Response 12

EPA disagrees that the prohibition of septage during a bypass of secondary treatment is environmentally unnecessary. The high concentrations of pollutants in septage discharged to the Connecticut River without secondary treatment could pose significant environmental and public health concerns. As such, the intent of Footnote of the Draft Permit is to minimize any negative impacts from septage received during periods when flows may not be receiving secondary treatment. EPA recognizes that the septage receiving practices employed at the SRWTF are such that potential negative impacts from septage being received when flows bypass secondary treatment are minimized because SWSC can hold septage in its dedicated septage receiving facility, if necessary, to prevent septage from bypassing secondary treatment during a wet weather event. In recognition of these practices, and to clarify the intent of Footnote 3, the Final Permit has been modified to read as follows:

> The Permittee shall not add septage to the waste stream at the treatment plant during activation of the secondary treatment bypass.

Regarding the concern expressed in the above comment with respect to the prohibition of discharges to the CSS which may contain "floatable materials" when CSO discharges may be active, Part I.B.3.c. of the Draft Permit, EPA recognizes the comment that the Permittee cannot manage such discharges from some sanitary sewer connections, specifically domestic sources. This permit provision is the minimum implementation level for complying with NMCs #3 (review and modification of the pretreatment program to assure CSO impacts are minimized), #6 (Control of solid and floatable materials in CSOs), and #7 (pollution prevention programs that focus on contaminant reduction activities). While the Permittee may be limited in its ability to control the addition of floatable materials from domestic discharges to the sanitary sewer, such is not the case for commercial and industrial sources. Control of the discharges from these latter sources may be implemented through the Permittee's pretreatment program. Part I.B.3.c. of the Final Permit has been changed to clarify that the prohibition does not apply to domestic discharges to the sanitary sewer system as follows:

> Except for discharges from domestic sources to the sanitary sewer system, discharges to the combined system of septage, holding tank wastes, or other material, which may cause a visible oil sheen or containing floatable material are prohibited during wet weather when CSO discharges may be active.

Comment 13

<u>Operation and Maintenance:</u> SWSC notes that both SWSC and the six co-permittees are required to comply with draft permit Part D "Operation and Maintenance of the Sewer System." Items of concern are as follows:

a) To the extent feasible, the permit should identify which of the seven permittees (SWSC and six towns) own which treatment works. Owners of named collection systems, pumping stations, outfalls, regulators, catch basins, etc., should be identified in the final permit. This will not only

help to identify responsible entities, it will also provide valuable guidance for future compliance actions that EPA may choose to take, so that the appropriate responsible party may be known.

b) Maintenance Staff: The draft permit requires that "adequate staff" shall be provided. Adequate staff is not defined in the permit, nor can a meaningful definition be determined. As per MassDEP requirements at 314 CMR 12.04(4), SWSC currently completes a biennial staffing report, which details staffing levels. The submission of the biennial staffing report should be sufficient.

c) Preventative Maintenance Program: "The permittee and co-permittees shall each will (sic) *maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure."* Even the best maintained systems may experience unexpected failure. It is suggested that the language be modified as follows:

   "The permittee and co-permittees shall each maintain an ongoing preventative maintenance program with the goal to prevent overflows and bypasses….

d) Infiltration/Inflow: Part D.5.b.(6) *"The permittee and co-permittee shall each… (require) A description of the permittee's programs for preventing I/I related effluent violations and all unauthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts."* This requirement is not enforceable or practical for the following reasons:

   1) In the event of a flow-related violation of the treatment plant's effluent limitations, in what manner would EPA determine the extent and liability of each (or all) of the six named co-permittees? How would EPA determine which town's I/I program was insufficient and the cause of a wet-weather plant effluent violation? How would EPA determine the violation was actually due to I/I? It is obvious that a correlation of controlling I/I from seven municipalities (six co-permittees and the City of Springfield) is not feasible, practical or enforceable.

   2) The service agreement between SWSC and the six co-permittees provides that flows from the customer towns be "capped" at identified levels. Further, EPA guidance provides that a town may determine whether it is economically more feasible to remove the I/I or treat the I/I.

      EPA has historically defined excessive infiltration/inflow as the *"quantities of I&I which can be economically eliminated from a sewer system as determined in a cost-effectiveness analysis-that compares the costs for correcting the I&I conditions to the total costs for transportation and treatment of the infiltration/inflow."*

      Note that EPA Region I uses this definition in its June 2014 publication entitled: "Guide for Estimating Infiltration and Inflow."

3) MassDEP already has a robust program for I/I analysis at 314 CMR 12.00, which requires all sewer authorities to submit an I/I analysis or I/I plan on or before December 31, 2017, consistent with MassDEP's Guidelines for Performing Infiltration/Inflow Analyses and Sewer System Evaluation Surveys (Guidelines). More specific requirements are located at 314 CMR 12.04, which provides for a comprehensive and detailed I/I program, including detailed requirements for combined sewer systems and all systems contributory to combined systems.

Request: SWSC requests the permit requirements reflect that conformance with MassDEP 314 CMR 12 will satisfy the I/I portions of this permit.

e) Collection System Mapping: Within 30 months of the effective date of this permit, the permittee and co-permittees shall each prepare detailed and extensive collection system mapping. Please provide the regulatory authority for this request, as well as the level of detail of this request. If the requirement is retained, SWSC requests the following modifications:

- Mapping is required of all sanitary sewers and manholes. Please revise this language to state, "All sanitary sewer extensions in the public-right-of way."

- Where the requirements mention information such as pipe diameter, date of installation, type of material, distance between manholes, interconnections, etc., please revise this language to include "to the extent feasible."

- Please allow 36 months to comply with this requirement to allow sufficient time to do procurement and provide a meaningful work product.

Response 13

EPA responds to the concerns raised in the above comment in the manner in which they appear as follows:

With respect to the commenter's suggestion to identify (in the permit) which Co-Permittee owns their respective portion(s) of the collection system, the information submitted in accordance with Part I.D. of the Final Permit by each Co-Permittee will provide this information, and may be used to identify which Co-Permittee owns and operates their respective portions of the collection system in future permits. Given their knowledge of municipal infrastructure and boundaries, the Permittee and Co-Permittees are in the best position to delineate the reach of their collection systems.

It is unclear what the commenter intends with the reference to a "staffing report". The Massachusetts regulation cited in the comment, 314 CMR 12.04(4), requires wastewater treatment facilities develop a staffing *plan* and submit it to MassDEP for approval every two years. A staffing plan that meets the requirements of 314 CMR 12.04(4) would also satisfy the requirement in Part I.D.5.b(3) of the Final Permit presuming that the plan includes information regarding collection system operation and maintenance. Assuring that there is adequate staffing to operate and maintain the sewer system is a critical component of

effective collective system management, as described in EPA's guidance for sanitary sewer collection system operation and maintenance.[42] The permit does not define "adequate staff", as this is specific to each Permittee and Co-Permittee, but "adequate" is a word in common usage whose ordinary meaning (i.e., satisfactory or acceptable in quality or quantity) is sufficiently clear as to reasonably guide compliance with the requirement. The permit requires the Permittee and Co-Permittees to (1) determine their staffing needs to ensure the proper operation and maintenance of their respective wastewater collection systems; and (2) determine how their operation and maintenance program will be staffed. This information is to be provided in the Collection System Operation and Maintenance Plan that is submitted in accordance with Part I.D.5. of the Final Permit. The biannual staffing report referenced in the comment may be submitted as an appendix to the O& M plan to satisfy the permit requirement relating to staffing levels, assuming the staffing levels described therein are, in the Permittee's determination, adequate.

With respect to the commenter's request to modify the language in Part I.D.2. (Preventative Maintenance Program), the preventative maintenance program is intended to prevent unauthorized discharges (i.e., overflows and bypasses) that are caused by malfunctions of the sewer system infrastructure. Given the importance of this provision to compliance with the permit and attainment of the Act's goals, EPA believes it should remain a clear and enforceable condition of the permit and should not be weakened through the introduction of precatory or subjective terms. Additionally, an "unexpected failure" (i.e., one not contemplated by a reasonable preventative maintenance plan, or one that occurs despite implementation of a reasonable preventative plan), would not appear to place the Permittee in an unreasonable position from the standpoint of enforcement. Part I.B.2. of the Final Permit remains unchanged from the Draft Permit.

The scope of the requirements in Part I.D.5.b.(6). of the Draft Permit (pertaining to Infiltration and Inflow (I/I)) is limited to the Permittee and Co-Permittees' submittal of a description of their respective programs for preventing and controlling I/I. While EPA acknowledges the difficulty in attributing flow-related violations at the treatment plant due to I/I to a specific municipality, the development and implementation of a program aimed at preventing and controlling I/I to the collection system is critical to ensure that I/I related effluent violations and unauthorized discharges do not occur. The information submitted in accordance with Part I.D.5.b.(6). of the Final Permit will provide the regulatory agencies with the necessary information for evaluating the magnitude of I/I into the collection system, and to inform future permit requirements.

With respect to efforts undertaken in accordance with State requirements, EPA acknowledges and supports that the Permittee is already engaged in preventative maintenance of the sewer system and activities to reduce I/I. EPA agrees that current and on-going work related to the requirements in the Part I.D. may be included in the O&M Plan. The SWSC's current and ongoing activities may satisfy the Final Permit requirements if they address each of the

[42] EPA, *Guide for Evaluating Capacity, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection System,* EPA 305-B-05-002, January 2005, available at: https://www3.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf

elements listed in Part I.D.2-3. EPA evaluates compliance based on the conditions set forth in the Final Permit.

With respect to the commenter's concerns regarding Collection System Mapping requirements contained in Part I.D.4. of the Draft Permit, it is well established that permit writers enjoy broad authority under the CWA and regulations to prescribe municipal data collection and reporting requirements. *See* CWA § 308(a)(A), 33 U.S.C. § 1318(a)(A) (specifying that permittees must provide records, reports, and other information EPA reasonably requires); CWA § 402(a)(2), 33 U.S.C. § 1342(a)(2) (requiring permittees to provide data and other information EPA deems appropriate); 40 CFR § 122.41(h) (permittees shall furnish "any information" needed to determine permit compliance); 40 CFR § 122.44(i) (permittees must supply monitoring data and other measurements as appropriate); *see also, e.g., In re City of Moscow*, 10 E.A.D. 135, 170-71 (EAB 2001) (holding that EPA has "broad authority" to impose information-gathering requirements on permittees); *In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 671-72 (EAB 2001) (holding that CWA confers "broad authority" on permit issuers to require monitoring and information from permittees). The mapping, O&M planning, and annual reporting requirements readily fall within the bounds of these broad provisions. The commenter should be aware that the Board has upheld collection system and mapping provisions in *In re Town of Concord Dep't of Pub. Works*, 16 E.A.D. 514, 543-45 (EAB 2014).

The comment to restrict sewer system mapping to "All sanitary sewer extensions in the public-right-of way owned by the SWSC or the co-permittees" has not been included in the Final Permit. This would not provide an accurate representation of the complete collection system, as it would exclude sewers that are not located beneath road way (*i.e.*, public rights of way).

Regarding the pipe diameter, date of installation, type of material, etc., EPA agrees that some information may be infeasible to obtain. Therefore, this subpoint of the Final Permit (Part I.D.4.(k).) has been updated to include "to the extent feasible." However, if certain information is determined to be infeasible to obtain, a justification must be included along with the map. If EPA disagrees with the assessment, it may require the map to be updated accordingly. EPA reserves the right to return to the original formulation in the next permit cycle if it determines that the Permittee's justifications were inappropriate and/or inadequate.

Regarding the request for 36 months to comply with this mapping requirement, the comment does not provide any justification for the need for an extended schedule for compliance, and EPA does not agree that additional time is needed to fulfill these requirements. In EPA's experience, municipalities have typically not have had an issue with meeting this requirement. To the extent there are issues that create obstacles to meeting the deadline, the Permittee can of course approach EPA's ECAD to discuss modes of compliance assistance (this is generally true for all the compliance schedule-related issues raised in the comments). Notably, given EPA's determination above regarding information that is infeasible to obtain, the need for additional time to comply is even more diminished.

Comment 14

Monitoring and Reporting: The draft permit, Part I.I., Item 2 (page 21 of 24), states: *"Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR."*

This language fails to address what timeframe reports may be submitted on Net DMR, merely that such a submission would be timely.

Request: SWSC requests that the language be revised to reflect that a report is considered timely if it is submitted electronically on the month following the initial report due date.

Response 14

The language in Part I.I.2. of the Final Permit has been modified to clarify that a report that is submitted electronically as a NetDMR attachment will be considered timely if it is submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this permit.

Comment 15

Collection System Operation and Maintenance Plan: Regarding draft permit page 15 of 24, Part D.5.a and page 16 of 24, Part D.5.b, both containing reporting and other requirements relative to the operation and maintenance plan for the collections system, SWSC has the following comments:

Part (a) requires the submission of a report that provides a description of the collection system management goal, staffing information management, and legal authorities. In addition, it requires a list of pump stations, recent studies and construction activities, and a plan for the development of a comprehensive operation and maintenance plan.

Six months is an insufficient amount of time to research, analyze, describe and report on these numerous items, particularly for any co-permittees who may not have done this in the past. In addition, the permittee and co-permittee each have its own procurement process that require board, City/Town council or meeting, and/or public work committee for approval of funding, preparation of request for proposal to select consulting firm, negotiation of contract with selected firm to start the work. This process typically takes 9-12 months. Therefore, SWSC requests that 18 months be allowed for compliance with this condition.

Part (b) requires that a complete and comprehensive Operation and Maintenance (O&M) Plan be completed, implemented, and submitted to EPA and MassDEP within 24 months. As above, this is a tremendous undertaking requiring an extensive amount of time and resource, particularly for any co-permittees who do not already have the prescribed O&M plan. In addition, the permittee and co-permittee each have its own procurement process that require board, City/Town council or meeting, and/or public work committee for approval of funding, preparation of request for proposal to select consulting firm, negotiation of contract with selected firm to start the work. This process typically

takes 9-12 months. Therefore, SWSC requests that 36 months be provided for the completion and implementation of this plan.

Request: SWSC requests that 18 months be provided for the completion of section (a) and 36 months be provided for the completion of the O&M plan under section (b).

Response 15

EPA believes 6 and 24 months is a reasonable amount of time to comply with Parts I.D.5(a) and (b), respectively, of the Draft Permit. EPA has been including these Capacity, Management, Operation and Maintenance (CMOM) requirements in municipal permits in Massachusetts for more than 10 years and permittees and co-permittees have been able to fulfill these requirements within this timeframe, utilizing available resources and expertise. In EPA's experience, these types of plans generally have not necessitated lengthy procurement processes or significant reliance on outside consultants or other experts. These plans are also intended to be iterative and improved upon and further developed from permit cycle to permit cycle. Therefore, the Permittee and Co-Permittees should provide the best available information within the timeframes designated in the permit and Part I.D.5 is unchanged in the Final Permit. Any current and on-going operation and maintenance-related work that has been completed or is in progress that meets the requirements in Part I.D. may be included in the O&M Plan.

Comments Related to Plant Effluent and Monitoring Issues

Comment 16

Pre-treatment: The draft permit page 19 of 24, section I.G (Industrial Users and Pretreatment Program), states: *"Within 120 days of the effective date of this permit, the permittee shall prepare and submit a written technical evaluation to the EPA analyzing the need to revise local limits."* Since SWSC's procurement process includes board approval for funding, preparation of request for proposal to select consulting firm, negotiation of contract with selected firm to start the work. This process typically takes 9-12 months. SWSC believes 120 days is an entirely insufficient time for SWSC to prepare a technical report to EPA regarding the need to revise local limits.

In addition, this section also requires that, *"Should the evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by EPA and submit the revisions to EPA for approval."* This is similarly an insufficient amount of time to complete such an analysis.

Request: SWSC requests that 18 months be provided for SWSC to prepare a technical evaluation analyzing the need to revise local limits, and that an additional 18 months be provided to revise local limits, if needed.

Response 16

The technical evaluation required by Part I.G.1. of the revised Draft Permit simply consists of completing and submitting the form (Attachment C [Reassessment of Technically Based Industrial Discharge Limits]) that was included as an attachment to the permit along with a concise explanation that based on the reassessment, there either is or is not a need to revise local limits. EPA's permitting staff has conferred with its compliance division, and in EPA's experience with other municipal permittees, this amount of time has proven sufficient to complete this task. The needs assessment should largely be within the expertise of and draw upon the knowledge of the SWSC treatment plant operators and staff. The deadline for completing the reassessment of technically-based industrial discharge limits (Attachment C) in the Final Permit remains unchanged from the Draft Permit.

EPA agrees that more time than what was proposed in the revised Draft Permit may be needed to revise and or develop and finalize local limits, should this be necessary. Therefore, the Final Permit has been revised to provide 18 months to complete any necessary revisions and submit them to EPA for approval.

Comment 17

***E. Coli* Monitoring Requirement:** The draft permit page 3 of 24, Part I requires compliance with *E. Coli* limits for the first time. While SWSC has no objection to the change in pathogen criteria from fecal coliforms to *E. Coli*, SWSC requests a period of time to review plant performance relative to *E. Coli*, adjust disinfection levels if needed, and better understand plant performance under all weather conditions, prior to this new limit becoming effective.

Request: SWSC requests that a compliance schedule of 18 months be provided prior to the new *E. Coli* limits becoming effective.

Response 17

EPA agrees that a compliance schedule is warranted, given that this is a new limit. The Permittee has not provided any justification for why, specifically, 18 months is required to comply with the limit. Under NPDES regulations, schedules must lead to compliance "as soon as possible." 40 CFR § 122.47(a)(1). The commenter acknowledges that the inclusion of the *E. Coli* requirement will not require any upgrade to the treatment plant, which might have warranted an extended compliance schedule, but instead will only entail operational adjustments. The Final Permit has been revised to provide a one-year compliance schedule that will allow the Permittee to observe and analyze plant performance under a full range of weather conditions—a primary concern of the commenter—and during this time, to adjust and optimize treatment. The fecal coliform limits that were in the 2000 permit will remain in effect until the *E. coli* limits become effective. Additionally, the Final Permit includes *E. coli* reporting requirements until the new limit goes into effect.

Comment 18

Total Residual Chlorine Monitoring: The draft permit, page 6 of 24, footnote 8 requires the minimum level (ML) for total residual chlorine (TRC) as 20 ug/L (0.02 mg/L). Further, the draft permit states: *"This value is the minimum level for chlorine using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater. Method 4500 CL-E and G. One of these methods must be used to determine total residual chlorine."*

a) With respect to Method 4500 CL-E (Low-Level Amperometric Titration):

1) In theory, Low-Level Amperometric Titration can be used to measure chlorine concentration at the required 0.02 mg/L level. However, a ML for TRC cannot be established in the low level (0.02 mg/l) range because one cannot obtain a certified, ready-made standard at that low level. According to Standard Methods, the minimum reporting level must be set to a concentration at or above the lowest standard used in the analysis.

2) Nevertheless, SWSC is aware of laboratories that have attempted to confirm the reproducibility of this method in the 0.02 mg/l range. Significant issues were identified in obtaining reproducible results, and in fact, so much difficulty was observed in New Jersey that New Jersey Department of Environmental Protection is not requiring this method.

b) With respect to Method 4500 CL-G (Colorimetric):

1) According to Standard Methods, the proposed method has *"...a minimum detectable concentration of approximately 0.01 mg/L under ideal conditions. Normal working detection limits typically are higher."* The estimated detection limit, as stated by the manufacturer (Hach) of the colorimeter, is 0.02 mg/L. According to the August 19, 2014 EPA federal register (490009), that gave guidance on using sufficiently sensitive test methods (SSTM), the "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the detection limit. Typically, MLs are three to five times the detection limit. Clearly, the reporting limit should not be equal to the minimum detection limit.

2) Attempting to verify the accuracy of a standard made at 0.02 mg/L within the required ± 10% of the actual value is impossible. Because the meter only reports values in ±0.01 mg/L increments, any value between 0.015 mg/L and 0.024 mg/L (or ± 25% of the actual value) would result in a reported value of 0.02 mg/L. To properly verify the accuracy, one must use a standard of 0.10 mg/L (which would result in an acceptable range of 0.09 to 0.11 mg/L).

3) The lowest certified ready-made standard that can be purchased is 0.10 mg/L. All other standards are made by diluting a certified standard in the 25-30 mg/L range. Creating a standard through dilution introduces further uncertainties into the

verification process. SWSC is aware of a laboratory that performed several validation tests by diluting a standard to 0.060 mg/L (or three times the estimated detection limit). The readings from the handheld colorimeter were not within 10% of the standard. Further refinement of the DPD Colorimetric Method may be needed to achieve reliable results in the 0.06 mg/L range.

4) In accordance with the Federal Sufficiently Sensitive Test Method Rule, CWA at 40 CFR Parts 122 and 136, *"An applicant can demonstrate that, despite a good faith effort to use a method that would otherwise meet the definition of 'sufficiently sensitive' the analytical results are not consistent with the QA/QC specifications for that method, then the Director may determine that the method is not performing adequately and the applicant should select a different method from the remaining EPA approved methods."*

5) Given the proposed TRC effluent limits of 0.26 and 0.46 mg/l, there is no reason to require a ML as low as 0.02 mg/l.

Request: SWSC requests that the ML for TRC be modified to 0.1 mg/l. This provides a sufficiently sensitive ML in order to determine compliance with the lowest limit of 0.26 mg/l, yet is high enough to avoid concern over the ability of either method to accurately read results at lower concentrations.

Response 18

EPA agrees that the requirement to achieve a minimum level no greater than 20 µg/L for total residual chlorine (TRC) is not necessary in this case as a minimum level higher than that would be sufficiently sensitive to measure compliance with the effluent limit. Therefore, this requirement has been removed from footnote 8 to Part I.A.1. in the Final Permit.

Language has been added to footnote 4 to Part I.A.1. of the Final Permit to clarify that approved analytical procedures found in 40 CFR Part 136 must be used for sampling and analysis of all pollutants, including TRC, unless other procedures are explicitly specified. Permits also include requirements necessary to comply with the *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule*.[43] This Rule requires that where EPA-approved methods exist, NPDES applicants must use sufficiently sensitive EPA-approved analytical methods when quantifying the presence of pollutants in a discharge. Further, the permitting authority must prescribe that only sufficiently sensitive EPA-approved methods be used for analyses of pollutants or pollutant parameters under the permit. The NPDES regulations at 40 CFR § 122.21(e)(3) (completeness), 40 CFR § 122.44(i)(1)(iv) (monitoring requirements) and/or as cross referenced at 40 CFR § 136.1(c) (applicability) indicate that an EPA-approved method is sufficiently sensitive where:

[43] Fed. Reg. 49,001 (Aug 19, 2014).

- The method minimum level[44] (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or

- In the case of permit applications, the ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or parameter in the discharge; or

- The method has the lowest ML of the analytical methods approved under 40 CFR Part 126 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

Comment 19

TSS and BOD Percent Removal: In the draft permit, Part I.A.1.(e) (page 8 of 24) states: *"The permittee's treatment facility will maintain a minimum of 85 percent removal of both the total suspended solids and biochemical oxygen demand during dry weather. Dry weather is defined as any calendar day on which there is less than 0.1 inch of rain and snow melt. The percent removal shall be calculated as a monthly average using the influent and effluent BOD5 and TSS values collected during dry weather days."*

The following concerns are noted:

a) Definition of Dry Weather: The permit does not identify where the rainfall is to be measured within the sewershed, nor how snow melt is to be calculated to determine a rainfall equivalent to 0.1 inch per day. In fact, SWSC is not aware of any method that can reliably correlate snow melt on any given day in various locations (which is subject to a number of factors) to rainfall.

   Further, and of even greater concern, is that EPA has included a rainfall amount at all. While the measurement of 0.1 inches of rain in any calendar day is one indicator of wet-weather flows at a treatment facility, SWSC finds that more often it is the intensity of the rain event itself, rather than the total quantity, which impacts treatment facility operations.

   EPA has routinely utilized the following language in New York NPDES permits:

   "…(rainfall) which causes plant flows over the permitted flow for a calendar day, the CBOD and TSS influent and effluent results for that day shall not be used to calculate the 30-day arithmetic mean value concentration limitations."

[44] The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL). Minimum levels may be obtained in several ways: They may be published in a method; they may be sample concentrations equivalent to the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a lab, by a factor. EPA is considering the following terms related to analytical method sensitivity to be synonymous: "quantitation limit," "reporting limit," "level of quantitation," and "minimum level." *See* Fed. Reg. 49,001 (Aug. 19, 2014).

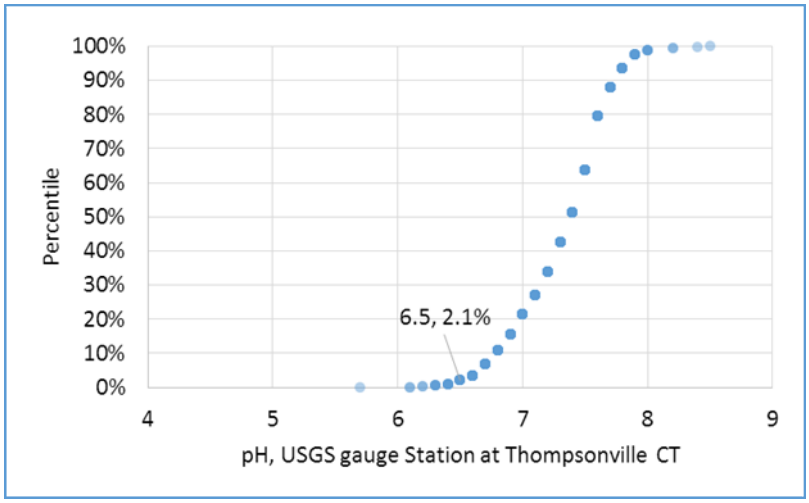
Request: SWSC requests that EPA remove the definition of "dry weather" in this provision and specify that the days excluded from the percent removal calculation, as wet-weather days are those days on which plant instantaneous (peak hourly) influent flows exceed 67 MGD.

Response 19

See Response 10 and Response 77 regarding the definition of dry weather in the Final Permit. Rainfall shall be measured by the SWSC's rain gages at locations that they deem appropriate and which will yield representative data. See also Response 9.

Comment 20

pH Effluent Limit Range: Part 1, page 3 of 24, contains a pH limit of 6.5 – 8.3 s.u.. Secondary treatment standards established at 40 CFR Part 133.102(c) allow for pH limitations to be assigned as 6.0 s.u. – 9.0 s.u. This is the range specified in NPDES permit for the nearby Holyoke wastewater treatment plant, which also discharges to the Connecticut River. The MA SWQS establishes that for class B waters, pH "[s]hall be in the range of 6.5 through 8.3 standard units and not more than 0.5 units outside of the natural background range." (314 CMR 4.05(4)(b)3). SWSC has examined ambient water quality data for pH (chart below) in the vicinity of the outfall (Connecticut River at Thompsonville, CT (USGS 01184000) and determined that the background pH ranges from 6.0 to 8.4 s.u. This high quality dataset contains 853 pH measurements over a long period of time; the range of 6.0 to 8.4 s.u. captures the 1% to 99% percentiles, providing a reliable background range.



Request: SWSC requests that allowable pH range be changed from 6.5 – 8.3 to 6.0 – 8.4 s.u, consistent with the secondary treatment standards of 6.0 – 9.0 s.u., in order to reflect measured background conditions in the receiving water.

Response 20

EPA must impose conditions that will meet applicable water quality standards. Where there are both technology- and water-quality requirements in play, EPA must impose the more stringent of the two. That the background concentrations are outside the range of the

applicable Massachusetts pH water quality criterion does not justify allowing the discharger to further contribute to an excursion of standards. Rather, that fact argues for effluent limits to be set at criteria (6.5-8.3) in order to prevent further degradation of the Connecticut River. Additionally, the commenter does not establish that the background range cited is natural background as opposed to background. But even if that condition were determined, with MassDEP's concurrence, the applicable criteria operates to compel a tightening of the acceptable range (i.e., assuming the natural background falls within 6.3-8.0 S.U., a further narrowing to ensure the effluent is within 0.5 S.U. of the background).

The data provided, which are from a sampling location downstream of the Springfield outfall in the Connecticut portion of the Connecticut River (and, therefore, are not representative of background (*i.e.*, upstream) conditions), indicate that there are some excursions beyond Connecticut's pH criteria of 6.5 to 8.0, which could argue for more stringent effluent limits, not less stringent. Since SWSC effluent sampling indicates that both monthly average and daily maximum pH levels are between 6.5 and 8.0 (within the range of the applicable criteria), EPA finds that SWSC is not contributing to this downstream excursion from Connecticut's pH criteria.

The pH effluent limits at the Holyoke Water Pollution Control Facility are actually 6.0 to 8.3 and are based on site-specific considerations, including a higher dilution factor, and therefore are not applicable to the SWSC discharge.

The commenter also does not explain how such a relaxation of the pH limit would accord with anti-backsliding requirements of the Act. With limited exceptions, none of which appear relevant here, effluent limitation in reissued permits must be as stringent as in the previous permit.

For these reasons, the pH limit range in the Final Permit remains unchanged from the draft.

Comment 21

Influent 24-Hour Composite Sampling: The draft permit, on page 3 of 24, requires 24-hour composite sampling for both BOD_5 and TSS. Footnote 6 further describes the sampling as: *"A 24-hour composite sample will consist of at least twenty-four (24) grab samples taken during one consecutive 24 hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow."*

Currently, SWSC uses four (4) samplers at the influent structure, one each for the Agawam forcemain pipe, West Springfield forcemain pipe, York Street forcemain Pipe, and the Main Interceptor Pipe. Due to the nature of the current system, there is not adequate mixing in the influent structure to obtain a representative sample without using four individual samplers.
Each sampler takes a fixed sample amount every 15 minutes into a 5-gallon jug. From each 5-gallon jug, a set amount of combined sample is further combined to form a representative influent sample. The amounts are: Agawam forcemain: 220 mL; West Springfield forcemain: 220 mL; York Street forcemain: 490 mL; and the Main Interceptor: 1,070 mL.

In order to provide "at least twenty-four (24) grab samples…either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow" would be excessively burdensome, and likely infeasible due to the current influent structure design. In order to provide samples that are both continuously timed and flow proportional, SWSC would need to purchase an additional 4 samplers (8 total) and have four samplers timed and four samples with a flow proportional signal, and then compare the results between the two. Even if SWSC could configure such an arrangement, the sampling process is overly burdensome and not necessary to provide a representative sample.

SWSC believes that a timed flow sample is a representative sample, and a flow proportional sample at this time is both unnecessary and infeasible.
6 months

Request: SWSC requests that EPA allow the current method of a timed flow sample to be considered a representative sample.

Response 21

Although the approach for the collection of a composite sample of the influent that is proposed in the above comment appears reasonable, more information relative to the derivation of the volumes described in the comment is needed for EPA to evaluate the representativeness of this method of sample collection. Additionally, a description as to how the Permittee will ensure that this method of sample collection is representative should be documented in the Permittee's sampling plan and submitted to EPA for further consideration. A provision has been added to footnote 6 in Part I.A.1 that allows the permittee up to six months from the effective date of the Final Permit to either submit this information to EPA for further consideration, or, alternatively, to comply with the method for collecting a composite sample of the influent specified in the permit.

Comment 22

Total Nitrogen Monitoring Frequency: In Part 1.A.1, page 4 of 24, EPA should clarify that total nitrogen (TN) reporting is a calculation, not an additional analyte for SWSC to analyze. TN is simply the sum of Nitrate + Nitrite plus total Kjeldahl nitrogen, both of which are already required to be analyzed weekly in the draft permit.

Average monthly load should be specified to be equal to the average monthly concentration multiplied by the average monthly flow. Maximum daily load should be specified to be equal to the maximum load on the days that concentrations were analyzed (i.e., concentration on that day multiplied by daily flow on that day). In addition, while SWSC's current and draft permit require that flow be reported on the DMR as a 12-month rolling annual average, the appropriate flow to be used when calculating a monthly load is the specific month flow of the time period being monitored. This needs to be noted in the permit.

Request: SWSC requests that footnotes be added to clarify that TN is a calculation, as described above, and to clarify the definitions of average monthly load and maximum daily load. Specifically,

clarify whether monthly load calculations shall be based upon the average monthly flow for the month in question or upon the 12-month rolling annual average.

Response 22

As there is no requirement to report the maximum daily total nitrogen load, no additional clarifications have been added regarding calculating it.

Part I.A.1., footnote 9, of the Draft Permit has been modified and divided into two footnotes in the Final Permit to clarify how total nitrogen concentration (whether maximum daily or average monthly) and average monthly load values are to be calculated and reported, as shown below:

10. Total Kjeldahl nitrogen, nitrite nitrogen, and nitrate nitrogen samples shall be collected concurrently. The results of these analyses shall be used to calculate both the concentration and mass loadings of total nitrogen

    (total nitrogen = total kjeldahl nitrogen + total nitrate nitrogen + total nitrite nitrogen)

    The total nitrogen loading values reported each month shall be calculated as follows:

    Total Nitrogen (lbs/day) = [(average monthly total nitrogen concentration (mg/l) * total monthly influent flow (Millions of Gallons (MG)) / # of days in the month] *8.34

11. The total nitrogen limit is an annual average mass-based limit (lb/day), which shall be reported as a rolling 12-month average. The value will be calculated as the arithmetic mean of the monthly average total nitrogen for the reporting month and the monthly average total nitrogen of the previous eleven months.

    Report both the rolling annual average and the monthly average each month.

    See Part I.H., Special Conditions for total nitrogen optimization requirements.

Comment 23

<u>Sampling Program</u>: In the draft permit page 5 of 24, footnote 4 states:

"A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report. Any changes to the routine sampling program must be reviewed and approved in writing by EPA and MassDEP."

While SWSC has no particular objection to providing EPA and MassDEP with a sampling schedule, nor with the requirement to append the DMR with correspondence at any time the routine protocol is not followed, the need for EPA and MassDEP to approve such a deviation is problematic.

First, SWSC is not aware of any regulation, law or regulatory guidance that governs the standards against which EPA and MassDEP would review the deviation from sampling protocol. Second, SWSC must be allowed the flexibility to modify sampling times based upon best professional judgement at the time of sampling, without the need of the regulator's pre-approval.
Finally, while SWSC has no objection to providing an explanation as to the circumstances surounding a deviation from sampling as an attachment to the DMR, the requirement that EPA and MassDEP approve the deviation is problematic. The plant operator would only deviate from the sampling plan in the event of critical and significant need, that he/she will determine based on best professional judgement at the time of the sample. It is not acceptable for EPA or MassDEP to potentially determine a sample invalid weeks or months after the fact. In the event EPA or MassDEP believes the deviation from the routine sampling was not substantiated, SWSC should be notified of the reason, in writing, and advised to avoid the situation in future sampling events.

Request: SWSC requests that the language be revised as follows:

"A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report. ~~Any changes to the routine sampling program must be reviewed and approved in writing by EPA and MassDEP~~."

Response 23

EPA has broad authority under the Act to impose appropriate conditions in an NPDES permit that are rationally related to implementing the objectives of the Act, in this case, to ensure that the data collected to ensure compliance with permit limitations and achievement of water quality standards is representative. This routine sampling requirement, and its underlying rationale, was recently upheld by the Board. *See In re City of Lowell*, NPDES Appeal 19-03, slip op. at 78-79 (EAB June 29, 2020), 18 E.A.D. __. Due to the presumably time-sensitive nature of circumstances which might warrant *occasional* deviations from the routine sampling program (i.e., in the event of critical and significant need based on the operator's best professional judgement), advanced approval from EPA and MassDEP is not necessary. EPA has removed the following statement from footnote 4 to Part I.A.1. of the Final Permit: *Any changes to the routine sampling program must be reviewed and approved in writing by EPA and MassDEP* and has replaced it with the following language*: A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month*.

Comments Related to Total Nitrogen TMDL Implementation Issues

Comment 24

Total Nitrogen Optimization Benchmark: In Part I.H.1.a, page 20 of 24, the permit states: *"The Permittee shall continue to optimize the treatment facility operations relative to total nitrogen ('TN') removal through continued ammonia removal, maximization of solids retention time while maintaining compliance with BOD and TSS limits, and/or other operational changes designed to enhance the removal of nitrogen in order to maintain the annual average mass discharge of total nitrogen at less than the existing mass loading of 2,279 lbs/day."* On pages 19-21 of the Fact Sheet, it is stated: *"Invitation for Public Comment on Three Options for Addressing Nitrogen Discharges from the Springfield Regional Wastewater Treatment Facility."*

The permit provides three potential options, as described in the Fact Sheet, for maintaining compliance with the nitrogen targets established by the December 2000 Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound (LIS TMDL). Of those three options, the Clean Water Act (CWA) only authorizes EPA to require Alternative 2. EPA's proposed application of an existing loading estimate as a new benchmark target is completely without technical or regulatory justification.

Request: SWSC requests that EPA incorporate Alternative 2 into the final NPDES permit at Part I.H.1.a as follows. "The Permittee shall continue to operate the treatment facility such that compliance with ammonia, BOD and TSS limits is maintained, while at the same time optimize nitrogen removal process to achieve an annual average benchmark concentration of 8 mg/L total nitrogen." [Alternative 2] The technical and regulatory bases for this request is provided below.

Basis for Comment

The SRWTF discharges into the Connecticut River. SRWTF's existing permit requires monitoring for nitrogen with report only "limits" for ammonia, nitrite and nitrate, and total Kjeldahl nitrogen. EPA records that from 2012 to 2016, SRWTF's annual TN load averaged 2,279 lbs/day, ranging from 1,650 lbs/day to 2,543 lbs/day. As part of the LIS TMDL, EPA established a baseline nitrogen loading for "out-of-basin" point sources discharging into the Connecticut River. The LIS TMDL defines "out-of-basin" to mean outside of states that border the Long Island Sound; with regard to the Connecticut River, "out-of-basin" means the State of Massachusetts, Vermont and New Hampshire. The LIS TMDL establishes a wasteload allocation (WLA) for out-of-basin point sources discharging into the Connecticut River basin that represents a 25% reduction from the 1990 baseline nitrogen loading.

Summary of LIS TMDL as it Applies to Draft SWSC Permit

Nitrogen is not the cause of any impairment identified in the Connecticut River. As EPA states in the permit Fact Sheet, pages 18-19, the basis for the proposed regulation of TN is the LIS TMDL; the nitrogen-driven eutrophication impacts in the Long Island Sound are driving the proposed reductions in nitrogen at SRWTF. As EPA describes, the Connecticut Department of Energy and Environmental Protection and New York Department of Environmental Protection developed the LIS TMDL to address the problems associated with excessive nitrogen loadings in the LIS. In

accordance with the CWA, the LIS TMDL establishes TN WLAs for in- and out-of-basin sources. Those out-of-basin point sources include wastewater treatment facilities discharging into the Connecticut, Housatonic, and Thames Rivers. For out-of-basin wastewater sources, the LIS TMDL requires a 25% reduction in the TN loading baseline established during the promulgation of the LIS TMDL.

The LIS TMDL baseline for out-of-basin TN wastewater loadings in the Connecticut River was 21,672 lbs/day. The allocation of TN load to out-of-basin wastewater sources (based on a 25% reduction from the baseline) equals 16,254 lbs/day. That target remains unchanged, as the LIS TMDL is still effective and has not been modified or redeveloped. As early as 2004 to 2005, the Connecticut River achieved more than a 25% aggregate reduction in TN wastewater loadings. Indeed, the estimated 2004 to 2005 TN wastewater loading to the Connecticut River was 12,836 lbs/day (15% less than the allowable TMDL load).

Section 303(d) of the CWA requires states to develop a TMDL management plan for waterbodies containing water quality limited segments [33 U.S.C. § 1313(d), (e)]. The TMDL first estimates the assimilative capacity of the waterbody relative to a particular pollutant. The TMDL then allocates that assimilative capacity among point (WLAs) and non-point pollutant sources (load allocations), taking into account natural background levels and a margin of safety (40. CFR § 130.7). Permitting authorities then develop permit limits for point sources that are consistent with the WLAs for each point source (Id).

The permittee understands EPA's objective in achieving greater nitrogen reductions in order to address the eutrophication issues afflicting the LIS; however, the permit limitations for out-of-basin point sources, like SRWTF, must be based on the WLA for the Connecticut River established by the LIS TMDL. Beyond the fact that the SRWTF achieved an annual average of 2,279 lbs/day for TN during certain years, EPA identifies no statutory or regulatory justification for applying that loading benchmark. In other words, EPA has identified no rational relation between the 2,279 lbs/day loading benchmark derived from the 2012 to 2016 monitoring data and the WLA for the Connecticut River, which out-of-basin point sources achieved over a decade ago. Accordingly, the CWA does not authorize the imposition of the proposed 2,279 lbs/day loading benchmark in the permit.

Analysis of Proposed Permit Requirements Relating to Nitrogen

The permit currently contains a loading benchmark of 2,279 lbs/day. EPA ostensibly bases this loading benchmark on the TMDL target for the Connecticut River (Fact Sheet, pages 19–20). However, EPA itself estimates that the 2,279 lbs/day loading benchmark for SRWTF will result, when combined with the other out-of-basin wastewater loads, in an estimated wastewater loading to the Connecticut River of 14,467 lbs/day. This estimated loading represents a 33% reduction from the baseline of out-of-basin wastewater TN loadings to the Connecticut River (Fact Sheet, page 20, Table 5). The LIS TMDL, however, only requires a 25% reduction from the 21,672 lbs/day baseline established for out-of-basin wastewater loadings of TN to the Connecticut River. Plainly, the CWA does not authorize EPA to require that SRWTF achieve a 33% reduction from the baseline established by the 2000 LIS TMDL. Rather, the LIS TMDL established, through proper procedure, a 16,254 lbs/day target, for which SRWTF's "report only" requirement has been more than sufficient.

As described below, SWSC is already in compliance with nitrogen TMDL requirements, and there is no potential for it to exceed the TMDL requirements given its current level of treatment. There is therefore no justification for EPA to impose new requirements for TN, nor is there a technical or regulatory basis to require that SWSC maintain its existing mass loading level.

The TMDL target for out-of-basin wasteloads for the Connecticut River is 16,254 lbs/day of TN, which is 25% lower than the TMDL baseline load of 21,672 lbs TN. Note that the TMDL baseline was based on loading conditions in 1990, when SRWTF was a conventional activated sludge plant (extended aeration process) with no biological nutrient removal capability and discharged an effluent with total nitrogen around 19.6 mg/L[45]. Attachment B includes a summary of SRWTF's original design, upgrade and operation history. In anticipation of the TMDL, SWSC upgraded SRWTF in 1995 to incorporate nitrogen removal. As a result, and as shown in Attachment C, Statistical Analysis of SRWTF Effluent TN Concentrations, SRWTF consistently discharges TN concentrations less than 10 mg/L, which represents a decrease of approximately 50% compared to TMDL baseline conditions.

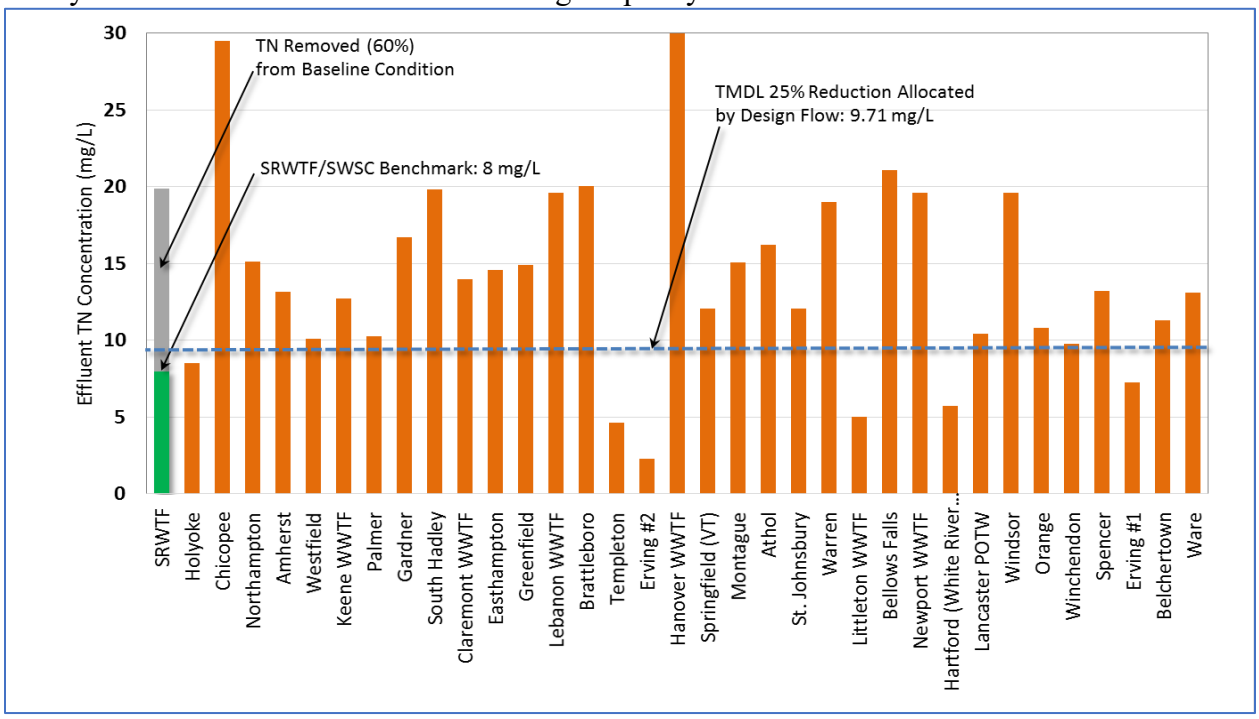
The revised loading estimate based on 2004-2005 DMRs indicated that the TMDL target for out-of-basin TN wasteloads from the Connecticut River had already been satisfied, with actual loads 15% below the allowable load. However, this does not mean that out-of-basin facilities will not be required to remove additional nitrogen. Indeed, if all the out-of-basin treatment plants were discharging their maximum permitted (design) flows at their existing TN effluent concentrations, the TMDL target would be exceeded by more than 30%. In order to maintain compliance with the TMDL, wastewater facilities in the Connecticut River basin that have not upgraded to remove nitrogen will need to do so as their actual flows increase closer to their maximum design flows.

Having noted this, the EPA's proposed use of existing loading estimate as some kind of new target is completely without technical or regulatory justification. Such a flawed approach would punish those facilities, like SRWTF, that have already upgraded and exceed required load reductions; it would not be justified to expect the same percent reduction from an upgraded plant as from a plant that had not upgraded. It is arbitrary and capricious to force a "benchmark" similar to an effluent limitation, or somehow interpret or extrapolate requirements set forth for SRWTF, in a manner creating significant, binding, regulatory consequences that would unfairly burden SWSC's ratepayers.

Instead, the TMDL combined wasteload allocation for the out-of-basin dischargers in the Connecticut River basin must be allocated among individual dischargers. While EPA certainly has some latitude in allocating the allowable TMDL wasteload among individual dischargers, the fairest and most straightforward way to do this is based on design flows. The TMDL-based calculated load for SRWTF would be 5,429 lbs/day, which is SRWTF's share of the allowable wasteload of 16,254 lbs/day based on its share of the total design flow (67 MGD out of 201 MGD). Based on its design flow of 67 MGD, the effluent concentration associated with SRWTF's individual wasteload would be 9.71 mg/L TN. To optimize biological nutrient removal at SRWTF, an optimization benchmark of 8 mg/L TN would ensure compliance with the annual average TMDL threshold concentration of 9.71 mg/L or the associated TMDL load of 5,429 lbs/day. There is no technical or regulatory basis to

[45] EPA's estimate of non-BNR plant based on an average of discharge concentration from conventional activate sludge plant in Massachusetts.

require SWSC to perform additional TN removal optimization, since it is already discharging considerably less TN than is allowable by the TMDL. The figure below shows the effluent TN concentrations of major out-of-basin dischargers to the Connecticut River basin, in order based on design flow, in comparison to the allowable annual average TN concentration of 9.71 mg/L at design flow capacity. SRWTF is one of only a few dischargers with effluent TN concentration that will satisfy the allowable TMDL load at its design capacity.



Average Annual Effluent TN Concentration from Out-of-Basin POTWs Tributary to the Connecticut River with Design Flow Greater than 1.0 MGD.

Evaluation of Proposed Optimization Requirements

EPA requires that SRWTF *"continue to optimize operations to meet a benchmark based on the current annual average TN load of 2,279 lbs/day"* based on the annual average TN load from 2012 to 2016 (Fact Sheet, pages 19–20). Further, certain provisions of the CWA authorize EPA to require certain control measures and proper operation and maintenance, but the statutory scheme does not authorize EPA to prescribe how a plant operator must achieve those requirements. Here, "optimization" is not an applicable control measure or operation and maintenance requirement deriving from any statutory or regulatory CWA authority.

Even if the CWA authorized the imposition of an optimization requirement, the requirement as described in the permit is impermissibly vague. EPA has not promulgated under the CWA any rule, guidance, or definition regarding what constitutes "optimization." Absent a clear statutory or regulatory directive regarding optimization, permittees have no opportunity to meaningfully comply with the requirement. For example, permittees have no guidance regarding whether or not optimization to "enhance nitrogen removal" could require additional expenditures for operation and maintenance or capital improvements. Additionally, even if SRWTF meets the permit's benchmark TN requirements, the optimization requirement still exposes the permittee to liability in the form of

potential permit violations or lawsuits from third-parties alleging that the permittee nonetheless failed to achieve some amorphous level of "optimization" or "enhanced nitrogen removal."

Ultimately, EPA has not identified, and the permittee is not aware of, any statutory or justification authority for the "optimization" requirement. The requirement both is impermissibly vague and exceeds EPA's authority where the out-of-basin point sources, including SRWTF, are already achieving the WLA for the Connecticut River.

Evaluation of Proposed Benchmark Alternatives

It is a widely acceptable practice in the wastewater treatment field that performance of process technologies is typically evaluated by effluent concentration (as opposed to effluent load) of the targeted compounds, e.g. BOD, TSS, NH3-N. Effluent TN concentration must therefore be the basis of any benchmark for performance evaluation/optimization.

Attachment D provides a literature review of design guidance, fact sheets, operation manuals and peer reviewed papers/reports. These well-established references and practices suggest that 8 mg/L TN is an appropriate effluent benchmark for the "typical" performance of BNR systems employing the Ludzack-Ettinger (LE) process configuration similar to the BNR process employed at SRWTF. Attachment D concludes the following:

> Utilizing effluent concentration (in lieu of effluent loading) as a benchmark for process performance evaluation and optimization is a technically sound approach consistent with industry standards. Based on the performance data available in the literature, it is not reasonable to expect a Ludzack-Ettinger (LE) process (currently SRWTF operates under such biological process mode) to consistently achieve an effluent concentration of lower than 8 mg/L TN because of the physical limitations imposed by its configuration. Therefore, if an optimization target of 8 mg/L TN effluent concentration is established, plants utilizing the LE process will likely require optimization to adjust operation parameters or potentially modifications to operate in different process configuration.

SWSC therefore requests EPA to select factsheet Alternative 2, 8 mg/L for inclusion as permit nitrogen special condition.

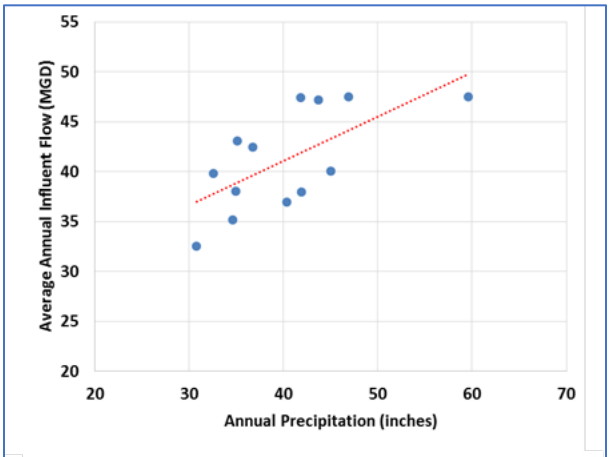
SWSC offers the following comments on the three options regarding nitrogen benchmark(s) (Fact Sheet, pages 19-21).

Draft Permit Proposal: Loading Benchmark of 2,279 lbs/day TN; No Concentration Benchmark

According to the Fact Sheet, the proposed loading benchmark was based on the current annual average TN load, which EPA calculated to be 2,279 lbs/day by averaging the TN load discharged from the facility over the last five years (2012-2016). There is no technical or regulatory basis to require that SWSC maintain its existing mass loading level, or its mass loading level during some arbitrary period. The TMDL target for out-of-basin wasteloads for the Connecticut River is 25% lower than the TMDL baseline load in 1990. In anticipation of the TMDL, SWSC upgraded its treatment plant in 1995 to incorporate nitrogen removal. As a result, SWSC consistently discharges

TN concentrations less than 10 mg/L, which represents a decrease of approximately 50% compared to TMDL baseline conditions (1990). Prior to 1995, SRWTF was a conventional activated sludge plant with very limited biological nitrogen removal capacity. SRWTF currently discharges approximately 37 to 50 MGD (average annual flow rate since 2004, as shown in Attachment E); flow is highly dependent on precipitation conditions, as shown in the figure to the right. However, it *is authorized to discharge up to its* design flow of 67 MGD. As its discharge flow increases, nitrogen load can be expected to increase proportionately. However, even at its maximum design flow, SRWTF will be discharging considerably less TN load than its share of allowable load. EPA's proposed use of an existing loading estimate as a new benchmark is completely without technical or regulatory justification, and would punish facilities, like SRWTF, that have already upgraded to remove nitrogen.

SRWTF's share of the allowable TMDL wasteload for out-of-basin dischargers in the Connecticut River basin will not be exceeded even if SRWTF were discharging at its maximum design flow of 67 MGD, as long as its effluent concentration remains below 9.71 mg/L TN. SRWTF consistently discharges at effluent concentrations below 10 mg/L TN, and would therefore not have any reasonable potential to exceed the TMDL threshold concentration of 9.71 mg/L (which is based on a long-term average) associated with allowable TMDL load. For the same reason, there is no technical or regulatory basis to require SRWTF to perform additional TN removal optimization, since it is already discharging considerably less TN than is allowable by the TMDL. Note also that a TN benchmark expressed as a load conflicts directly with the CSO control objective of maximizing flows to the treatment facility.



Correlation between Rainfall and SRWTF Influent Flow (2004 to 2016)

Alternative 1: Loading Benchmark of 2,534 lbs/day TN; Concentration Benchmark of 8 mg/L TN

EPA's first proposed alternative includes an annual average concentration-based benchmark of 8 mg/L combined with a higher annual average mass-based benchmark of 2,534 lbs/day (Fact Sheet, pages 20-21). EPA explains that the 2,534 lbs/day loading benchmark equals the maximum annual average TN load discharged from SRWTF from 2012 to 2016 (Id). EPA estimates that even this higher loading benchmark would still achieve an estimated load of 14,772 lbs/day to the Connecticut

River from out-of-basin point sources. Again, the 2000 LIS TMDL requires a 25% reduction from the 21,672 lbs/day baseline, but the 2,534 lbs/day benchmark would represent a 32% reduction from that LIS TMDL baseline. Like the proposed 2,279 lbs/day benchmark in the permit, this 2,534 lbs/day benchmark bears no rational relation to the TMDL from which it derives. In other words, if the out-of-basin point sources, including SRWTF, can continue to achieve the actual WLA of 16,254 lbs/day for the Connecticut River, EPA lacks the statutory and regulatory authority to impose more stringent TN loading benchmarks.

As stated above, there is no technical or regulatory basis to require that SRWTF maintain its existing mass loading level. Even if it were discharging at its maximum design flow of 67 MGD, SRWTF would still be discharging less TN load that its share of the allowable TN wasteload.
A benchmark concentration of 8 mg/L TN is reasonable as an annual average optimization benchmark, since meeting the benchmark would ensure that SRWTF will not have any potential to exceed the TMDL threshold concentration of 9.71 mg/L associated with its allowable TMDL load. Note again that a TN benchmark expressed as a load conflicts directly with the CSO control objective of maximizing flows to the treatment facility.

Alternative 2: No Loading Benchmark; Concentration Benchmark of 8 mg/L TN

As stated above, a benchmark concentration of 8 mg/L TN as an annual average is reasonable, since meeting the benchmark would ensure that SRWTF will not have any potential to exceed the TMDL threshold concentration of 9.71 mg/L associated with its allowable TMDL load. Furthermore, expressing the TN benchmark as a concentration rather than a load is fully consistent with the CSO control objectives. Since SRWTF is only permitted to discharge up to 67 MGD as an annual average, any concentration limit or benchmark will effectively impose a loading benchmark as well.

The second alternative would encourage a consistent level of treatment regardless of changes in flow at Springfield. As EPA acknowledges, Alternative 2 will still achieve the LIS TMDL target of a 25% reduction in TN loadings from the LIS TMDL baseline (Fact Sheet, page 21). Indeed, Alternative 2 represents the only option that EPA has statutory authority to impose, as it constitutes the only option that does not impose a nitrogen loading benchmark wholly unrelated to the LIS TMDL nitrogen targets.

Additionally, EPA acknowledges that Springfield anticipates future growth and is currently exploring the possibility of consolidating wastewater flows from other facilities throughout the Springfield area and diverting them for treatment at the SRWTF. Affording the SRWTF the opportunity to explore this possibility could achieve significantly greater reductions in nitrogen loadings to the Connecticut River than any of the proposed alternatives for this permit. Notably, other facilities in the Springfield area do not have capacity or technology to achieve the advanced required nitrogen removal that the SRWTF is designed for and currently able to achieve. In that regard, any diverted flows will receive a much higher level of nitrogen removal treatment at the SRWTF than they currently receive at surrounding facilities. The impact of reductions in nitrogen loadings from diversion of flow away from less technologically-advanced facilities in the Springfield area to the larger and more technologically-advanced SRWTF would far outweigh the impact of any increased nitrogen loadings resulting from the new diversions to the SRWTF. Expressing the

nitrogen benchmark in terms of concentration rather than load will better allow SRWFT to explore these possibilities, which would result in considerable overall load reductions within the watershed.

Response 24

See discussion in the General Response.

Comment 25

Total Nitrogen Annual Report Requirement: Part I.H.1.b, page 20 of 24 states: *"The permittee shall submit an annual report to EPA and the MassDEP by February 1st of each year, that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and tracks trends relative to the previous calendar year. If, in any year, the treatment facility discharges in excess of 2,279 lbs/day TN on an annual average basis, the annual report shall include a detailed explanation of the reasons why TN discharges have increased, including any changes in influent flows/loads and any operational changes. The report shall also include all supporting data."*
There is no basis or justification for additional reporting requirements relating to the discharge of nitrogen loads from the SRWTF. As explained in the comment above, SRWTF has no reasonable potential to exceed its TMDL allocation for nitrogen, even if discharging at its design flow of 67 MGD. Nitrogen discharges from the SRWTF will be reported on monthly through the DMRs; additional reporting for the SRWTF would be duplicative and not justified. Instead, TN reporting should focus on comparison with the benchmark concentration of 8 mg/L on an annual average basis. [Alternative 2]

Request: SWSC requests that the following language be substituted for the draft language at Part I.H.1.b.: "The permittee shall submit an annual report to EPA and the MassDEP by February 1st of each year that documents the average annual nitrogen concentration and load discharged from the facility, and tracks trends relative to the previous calendar year. If, in any year, the treatment facility discharges in excess of 8 mg/L TN on an annual average basis, the annual report shall include a brief explanation of the reasons why TN discharges increased that particular year, including any changes in influent flows/loads and any operational changes. The report shall also include all supporting data."

Response 25

As discussed in Response 24, EPA disagrees that there is no justification for the special conditions related to optimization reporting. See also the General Response.

The language in Part I.H.1.b. of the 2017 Draft Permit was modified in the 2018 Draft Permit to read as follows:

> *"The permittee shall submit an annual report to EPA and the MassDEP by February 1st of each year, that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and*

tracks trends relative to the previous calendar year. The report shall also include all supporting data."

The revised language maintains the requirement for the Permittee to include a summary of activities related to optimizing nitrogen removal efficiencies that was included in the 2017 Draft Permit and removes the requirement for including detailed information in the event the facility discharges more than 2,279 lbs/day TN on an annual average basis. Including the information that is required by Part I.H.1.b. of the revised Draft Permit in the annual nitrogen report is critical to EPA's overall permitting approach, as well as carrying its obligations under Section 301 to ensure compliance with water quality standards in this and subsequent permitting cycles, *see e.g.,* Fact Sheet p. 21, because it will provide the regulatory agencies with information that is necessary to comprehensively assess facility operations and how they impact nitrogen removal efficiency. This information will help inform and improve future permitting actions, including by assisting EPA to fine tune optimization requirements, both at this facility and throughout the LIS watershed, some facilities in which are only subject to total nitrogen optimization requirements. Of course, this narrative condition also requires dischargers to take reasonable steps to minimize loading to LIS, which is important given that cultural eutrophication is ongoing in that water body. This language remains unchanged in the Final Permit. EPA disagrees with the assertion that the optimization condition is vague. In its common usage, optimization means act of making the best or most effective use of a situation or resource as possible. The condition provides a clear endpoint and is sufficient to apprise a person of ordinary intelligence of their obligations. While EPA could have crafted a more prescriptive standard, EPA opted for a requirement that provides the Permittee with a reasonable amount of flexibility in achieving it, so that it can leverage its knowledge of plant operations and capabilities.

See also discussion in General Response.

Comment 26

Future Nitrogen Limits: On page 21 of the Fact Sheet, EPA includes a section discussing "Future Nitrogen Limits." In this section, EPA indicates that "more work must be done" to address nitrogen, dissolved oxygen, and related water quality issues in Long Island Sound. To address those issues, EPA appears to be pursuing a multi-step process, starting with establishing "thresholds" for certain parts of the Sound watershed, then doing new allocations of TN loadings where necessary, possibly culminating in new water quality-based permit limits. Since those thresholds, allocations and limits have not yet been developed, SWSC has no specific issues to raise in these comments regarding this section. As a general matter, though, SWSC wants to emphasize that in taking any of the listed possible actions, EPA (and the relevant states in the Sound watershed) will have to follow established procedures that are required under the Clean Water Act and implementing regulations. Specifically, the agencies will need to adopt numeric water quality standards for parameters of concern, assess waters to determine if they meet those standards, include waters on the State 303(d) lists if they do not meet the standards, develop new TMDLs or modify existing TMDLs to address the impairments, and finally, issue water quality-based permit limits that are based on the allocations in the TMDLs. SWSC intends to be an active participant in all of those processes, and it is critical

that the agency efforts be transparent and open for any and all stakeholders to play an active and constructive role.

Response 26

EPA appreciates the SWSC's concerns regarding ongoing efforts to address nitrogen-related impacts to Long Island Sound and encourages the Permittee to remain an engaged stakeholder in proceedings which impact the Connecticut River and Long Island Sound Watersheds.

EPA does not understand SWSC's comment to be specific to the Springfield permit but, rather, a comment on the general structure of the CWA. Nonetheless, EPA responds as a matter of clarification that there is no regulatory basis for the commenter's assertions that EPA and the affected states must (1) adopt numeric water quality standards for parameters of concern; (2) assess waters to determine if they meet those new standards; (3) include waters on the State 303(d) lists if they do not meet the standards; (4) develop new TMDLs or modify existing TMDLs to address the impairments, and (5) issue water quality-based permit limits that are based on the allocations in the TMDLs prior to including a water-quality based effluent limitation in a permit. To the contrary, the relevant regulations require the permit writer to include an effluent limit for any pollutants which EPA determines "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." 40 CFR §122.44(d)(1)(i)-(iii). Where a TMDL has been established, the permit writer is required to ensure that the effluent limits are "consistent with the assumptions and requirements of any available wasteload allocation" applicable to the discharger." 40 CFR §122.44 (d)(1)(vii)(B). Narrative water quality standards have the same force and effect as numeric ones. Neither inclusion on a 303(d) list or development of a new or revised TMDL are preconditions to a WQBEL upon EPA finding reasonable potential.

In accordance with the aforementioned regulations, EPA included limitations and conditions in the 2018 Revised Draft Permit and the Final Permit which are consistent with the assumptions and requirements of the 2000 TMDL for out of basin point source dischargers to the Long Island Sound watershed (See *A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* (CT DEP 2000), Fact Sheet p. 18, revised Fact Sheet Supplement p. 3-4, and the General Response), and that are necessary to ensure compliance with water quality standards under Section 301.

Comment 27

Annual Load Estimate 2004-2005: "In 2006, in order to facilitate the TMDL in out-of-basin NPDES permits, EPA completed an analysis of the out-of-basin point sources, using 2004-05 discharge data, to determine compliance with the TMDL requirement of a 25% reduction. As can be seen from the summary in Table 3, the total estimated loading from the Connecticut River was 13,836 lbs/day in 2004-2005. Of that amount, Springfield's annual average TN load was 1,648 lbs/day." (Factsheet Page 18,Part VII, Nitrogen, second paragraph)

Using 2004 -2005 DMR data to estimate average annual total nitrogen loading from SRWTF is incorrect base on the following reasons:

1. SRWTF DMR reported 10 sets of nitrogen data (as shown in table below) in 2004. Five (5) of the nitrogen data show 0.00 mg/L TKN which include organic nitrogen and NH3, while reported NH3 range from 0.28 to 0.55 mg/L (yellow highlighted in table below). It is wrong to report any TKN with value less than NH3.

2. Statistically speaking, average of 5 data points is inadequate to characterize average annual condition (average of 365 days). It is wrong to use 2004-2005 data for loading estimate and/or plant performance assessment.

Month	NH3	TKN	NO2	NO3	TN	Flow	Pounds
Jan							
Feb	0.32	1.12		2.11	3.23	39.9	1,076
Mar	0.42	1.40		2.19	3.59	41.1	1,231
Apr	0.55	0.00		2.51	2.51	55.4	1,159
May	0.32	0.00		3.11	3.11	48.6	1,259
Jun	0.36	1.18		2.93	4.11	41.5	1,421
Jul							
Aug	0.33	0.00		4.13	4.13	39.5	1,362
Sep	0.45	1.10		4.40	5.50	43.4	1,990
Oct	0.28	0.00		4.00	4.00	39.1	1,306
Nov	0.42	1.96		4.87	6.83	38.5	2,191
Dec	0.40	0.00		3.06	3.06	44.8	1,143
Average	**0.39**	**0.68**		**3.33**	**4.01**	**43.2**	**1,414**

Request: SWSC requests that EPA eliminate all references to 2004-2005 load of 1,648 lbs/day and acknowledge there was not enough data to characterize average annual condition for that period.

Response 27

While the valid data that were collected from 2004-2005 should not be discounted, EPA agrees that a sample size of n = 5 may not, for the purposes here, be a sufficiently robust data set to which statistical methods can be applied such that the results can be interpreted with a large degree of confidence. Additionally, it would appear that TKN results that are less than NH_3 results are unreliable. In recognition of the limitations of the data from 2004-2005, EPA

evaluated effluent data from 2012-2016 (adding an additional sixty data points), in developing the limit that was proposed in the revised Draft Permit (see Fact Sheet Supplement p. 2-3 and 2017 Fact Sheet, p. 18-21 and Attachment H). Incorporation of this additional data yields a sample size of 65, which is sufficient for characterizing the effluent.

However, as discussed in detail in Section II of the General Response, in response to comments received regarding the need for a fair and comprehensive approach for all out-of-basin discharger in the LIS watershed that is based on design flow, the Agencies developed a new approach for TN discharges. Consistent with the new approach for facilities with design flow greater than 10 MGD, the total nitrogen effluent limit for SWSC has been revised in the Final Permit to 2,794 lb/day, based on design flow of 67 MGD and 5 mg/L total nitrogen, and is no longer derived from performance data. *See* Response 24 above and General Response.

Comment 28

Erroneous Ammonia Data: The table in Factsheet Attachment H contains erroneous data (yellow highlighted) with Ammonia (not listed in the table) higher than Total Kjeldahl Nitrogen or 0 mg/L TKN. SWSC requests to replace the table with QA/QC'ed table below.

Date	**Rolling Annual Average Flow**	**Ammonia [as N]**	**Nitrite + Nitrate total [as N]**	**Nitrogen, Kjeldahl, total [as N]**	**Total Nitrogen**	**Total Nitrogen**	**Total Nitrogen (based on rolling annual average flow)**
	Million Gallons per Day	**mg/l**	**mg/l**	**mg/l**	**mg/l**	**lbs/day**	**lbs/day**
28-02-2001	36.9	0.2	3.1	2.24	5.34	1,638	1643
31-03-2001	48.7	0.9	1.84	2	3.84	1,554	1560
30-04-2001	56.33	0.5	2.26	1.9	4.16	1,948	1954
31-05-2001	44.7	0.5	2.35	1.65	4	1,486	1491
30-06-2001	42.3	0.5	1.74	1.12	2.86	1,006	1009
31-07-2001	41.57	0.7	2.94			0	0
31-08-2001	40.9	0.6	1.86	1.76	3.62	1,231	1235
30-09-2001	37.4	0.0	2.08	1.18	3.26	1,013	1017
31-10-2001	40.25	0.4	1.95	1.18	3.13	1,047	1051
30-11-2001	41.3	0.5	3.18	1.23	4.41	1,514	1519
31-12-2001	40.8	0.7	6.54	3.696	10.236	3,472	3483
31-01-2002	39.1	0.8	3.63	2.3	5.93	1,927	1934
28-02-2002	38.8	0.4	1.47	1.8	3.27	1,055	1058

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
31-03-2002	37.8	0.7	2.21	1.9	4.11	1,291	1296
30-04-2002	36.4	0.6	3.52	1	4.52	1,368	1372
31-05-2002	36.1	0.4	2.75	1.76	4.51	1,353	1358
30-06-2002	35.7	0.6	3.96	1.18	5.14	1,525	1530
31-07-2002	35.5	0.6	4.14	1.18	5.32	1,570	1575
31-08-2002	35.3	0.5	3.71	1.18	4.89	1,435	1440
30-09-2002	35.2	0.4	0.455	1.6	2.055	601	603
31-10-2002	35.2	0.6	3.93	1.26	5.19	1,519	1524
30-11-2002	35.9	0.3	2.06	1.23	3.29	982	985
31-12-2002	36.3	0.5	3	1.18	4.18	1,261	1265
31-01-2003	37.15	0.0	2.12	1.47	3.59	1,109	1112
28-02-2003	37.38	3.0	3.32	4.12	7.44	2,312	2319
31-03-2003	38.5	1.8	3.14	3.39	6.53	2,090	2097
30-04-2003	39.4	0.7	2.01	1.23	3.24	1,061	1065
31-05-2003	39.8	0.8	4.52	2.24	6.76	2,236	2244
30-06-2003	40.9	1.0	3.65	2.94	6.59	2,240	2248
31-07-2003	41.6	0.6	2.82	2.46	5.28	1,826	1832
31-08-2003	42.2	0.6	3.25	1.18	4.43	1,554	1559
30-09-2003	40.1	0.3	2.17	1.18	3.35	1,117	1120
31-10-2003	44.1	1.0	0.357	2.06	2.417	886	889
30-11-2003	44.8	0.5	2.55	1.23	3.78	1,408	1412
31-12-2003	45.8	0.5	3.2	1.23	4.43	1,687	1692
31-01-2004	46.5	0.0	3.1	2.06	5.16	1,994	2001
29-02-2004	46.6	0.3	2.11	1.12	3.23	1,251	1255
31-03-2004	45.9	0.4	2.19	1.4	3.59	1,370	1374
30-04-2004	46.2	0.6	2.51	0	2.51	964	967
31-05-2004	46.5	0.3	3.11	0	3.11	1,202	1206
30-06-2004	45.6	0.4	2.93	1.18	4.11	1,558	1563
31-07-2004	45.4	0.0	3.23	1.76	4.99	1,883	1889
31-08-2004	45.3	0.3	4.13	0	4.13	1,555	1560
30-09-2004	45.2	0.5	4.4	1.12	5.52	2,074	2081

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
31-10-2004	44.5	0.3	4	0	4	1,480	1485
30-11-2004	43.7	0.4	4.87	1.96	6.83	2,481	2489
31-12-2004	43.4	0.4	3.06	0	3.06	1,104	1108
31-01-2005	43.2	0.0	3.06	1.47	4.53	1,627	1632
28-02-2005	49.9	0.0	0.988		0.988	410	411
31-03-2005	44.2	0.5	3.58	0	3.58	1,315	1320
30-04-2005	44.2	0.6	2.78	0	2.78	1,021	1025
31-05-2005	44	0.3	2.17	1.18	3.35	1,225	1229
30-06-2005	43.9	0.4	2.03	2.35	4.38	1,598	1604
31-07-2005	43.8	0.7	3.78	1.6	5.38	1,959	1965
31-08-2005	43.6	1.2	4.06	3.23	7.29	2,642	2651
30-09-2005	43.2	0.7	2.12	1.6	3.72	1,336	1340
31-10-2005	45.6	0.2	2.75	0	2.75	1,042	1046
30-11-2005	47	0.9	4.24	1.6	5.84	2,282	2289
31-12-2005	47.5	0.5	4.14	1.4	5.54	2,187	2195
31-01-2006	48.9	0.2	1.78	0	1.78	724	726
28-02-2006	49.9	1.3	0.988		0.988	410	411
31-03-2006	49.7	0.5	1.95	1.76	3.71	1,533	1538
30-04-2006	48.4	1.0	2.79	1.4	4.19	1,686	1691
31-05-2006	48.7	1.6	1.57	2.52	4.09	1,656	1661
30-06-2006	49.8	1.5	1.64	2.94	4.58	1,896	1902
31-07-2006	50.6	1.7	1.18	2.65	3.83	1,611	1616
31-08-2006	51.1	1.5	3.07	2.52	5.59	2,374	2382
30-09-2006	51.3	3.3	2.22	5.54	7.76	3,309	3320
31-10-2006	49.2	0.7	2.82	0	2.82	1,153	1157
30-11-2006	48.4	1.8	0.118	3.08	3.198	1,287	1291
31-12-2006	47.5	0.3	1.81	0	1.81	715	717
31-01-2007	45.7	1.6	0.842	3.53	4.372	1,661	1666
28-02-2007	47.5	3.8	0.606	5.6	6.206	2,450	2459
31-03-2007	43.9	2.5	0.234	4.41	4.644	1,695	1700
30-04-2007	45.2	1.4	1.18	1.18	2.36	887	890

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
31-05-2007	44.9	1.7	0.131	2.94	3.071	1,146	1,150
30-06-2007	43.7	2.0	2.81	2.24	5.05	1,834	1841
31-07-2007	42.8	0.8	6.75	3.64	10.39	3,696	3709
31-08-2007	42.3	1.2	3.21	2.35	5.56	1,955	1961
30-09-2007	41.9	0.0	3.36	1.47	4.83	1,682	1688
31-10-2007	41.3	0.9	266	0		0	0
30-11-2007	40.4	0.8	2.1	1.54	3.64	1,222	1226
31-12-2007	39.8	0.7	2.37	2.16	4.53	1,499	1504
31-01-2008	39.5	0.8	1.79	1.29	3.08	1,011	1015
29-02-2008	41.5	0.8	2.64	1.18	3.82	1,318	1322
31-03-2008	42.5	0.7	1.86	1.18	3.04	1,074	1078
30-04-2008	41.8	0.6	2.37	1.47	3.84	1,334	1339
31-05-2008	41.7	2.3	3.08	3.23	6.31	2,187	2194
30-06-2008	41.9	0.4	3.92	2.16	6.08	2,118	2125
31-07-2008	42.6	0.5	2.46	1.79	4.25	1,505	1510
31-08-2008	43.7	0.7	2.81	1.67	4.48	1,627	1633
30-09-2008	45	0.4	3.34	2.162	5.502	2,058	2065
31-10-2008	45.6	0.7	3.38	2.35	5.73	2,172	2179
30-11-2008	46.1	1.0	2.96	1.45	4.41	1,690	1696
31-12-2008	47.6	1.0	1.73	1.37	3.1	1,227	1231
31-01-2009	48.1	0.9	3.24	2.07	5.31	2,123	2130
28-02-2009	46.7	2.3	3.19	3.49	6.68	2,593	2602
31-03-2009	45.8	0.8	3.39	1.6	4.99	1,900	1906
30-04-2009	45.1	0.8	3.79	2.31	6.1	2,287	2294
31-05-2009	44.8	0.6	5	2.45	7.45	2,774	2784
30-06-2009	44.8	0.8	4.89	3.2	8.09	3,013	3023
31-07-2009	45.1	0.8	3.28	2.5	5.78	2,167	2174
31-08-2009	44.9	0.3	4.88	1.2	6.08	2,269	2277
30-09-2009	44	0.8	2.87	0	2.87	1,050	1053
31-10-2009	43.7	0.0	2.743	2.8	5.543	2,014	2020
30-11-2009	43.3	1.7	0.78	3.4	4.18	1,504	1509

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
31-12-2009	43.3	10.0	0.65	10	10.65	3,833	3846
31-01-2010	42	0.6	1.3	2.5	3.8	1,327	1331
28-02-2010	37.3	1.3	1.478	2.1	3.578	1,109	1113
31-03-2010	38.1	1.2	0.67	6.7	7.37	2,334	2342
30-04-2010	42.3	0.6	3.356	1.8	5.156	1,813	1819
31-05-2010	42.2	0.7	1.5	1.5	3	1,052	1056
30-06-2010	41.7	0.3	5.82	1.7	7.52	2,607	2615
31-07-2010	40.2	0.5	2.8	2.5	5.3	1,771	1777
31-08-2010	39	0.9	2.659	2.8	5.459	1,770	1776
30-09-2010	38.5	0.6	4.42	2	6.42	2,055	2061
31-10-2010	38.3	0.2	7.569	1.1	8.669	2,760	2769
30-11-2010	38.4	1.2	2.467	2.2	4.667	1,490	1495
31-12-2010	38.1	0.9	2.059	1.5	3.559	1,127	1131
31-01-2011	37.5	0.9	1.28	2.1	3.38	1,054	1057
28-02-2011	37.3	1.2	1.478	2.1	3.578	1,109	1113
31-03-2011	38.1	4.0	0.669	6.7	7.369	2,334	2342
30-04-2011	38.4	4.8	0.273	7.6	7.873	2,513	2521
31-05-2011	39.3	4.5	0.158	6.4	6.558	2,142	2149
30-06-2011	40.4	5.0	0.354	7.1	7.454	2,503	2512
31-07-2011	41.1	1.3	3.17	2.8	5.97	2,040	2046
31-08-2011	42.1	1.0	1.986	2.1	4.086	1,430	1435
30-09-2011	43.8	1.9	0.339	2.8	3.139	1,143	1147
31-10-2011	44.9	0.4	2.363	1.1	3.463	1,292	1297
30-11-2011	46.1	0.7	2.31	2.1	4.41	1,690	1696
31-12-2011	47.4	2.0	0.445	2.4	2.845	1,121	1125
31-01-2012	48.5	7.4	0.016	7.8	7.816	3,151	3161
29-02-2012	48.7	8.2	0.455	9.6	10.055	4,070	4084
31-03-2012	47.2	3.5	0.017	5	5.017	1,968	1975
30-04-2012	46	4.6	0.884	7.2	8.084	3,091	3101
31-05-2012	45	1.0	1.766	2.5	4.266	1,596	1601
30-06-2012	44.1	2.4	0.339	3.9	4.239	1,554	1559

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
31-07-2012	43.6	1.1	2.173	1.9	4.073	1,476	1481
31-08-2012	43	0.0	2.266	1.4	3.666	1,310	1315
30-09-2012	41.4	1.2	2.675	1.6	4.275	1,471	1476
31-10-2012	40.2	5.1	0.92	8.1	9.02	3,014	3024
30-11-2012	38.6	10.0	1.437	13	14.437	4,632	4648
31-12-2012	37	5.6	0.84	8.4	9.24	2,842	2851
31-01-2013	36.1	7.1	0.602	9.5	10.102	3,031	3041
28-02-2013	35.7	8.3	0.393	11	11.393	3,381	3392
31-03-2013	35.7	1.1	2.848	2.1	4.948	1,468	1473
30-04-2013	35.6	1.5	1.58	2.9	4.48	1,326	1330
31-05-2013	35.7	5.6	0.433	8	8.433	2,503	2511
30-06-2013	37	0.9	3.81	2.9	6.71	2,064	2071
31-07-2013	37.8	1.1	2.31	2.9	5.21	1,637	1642
31-08-2013	38	7.5	0.545	10	10.545	3,331	3342
30-09-2013	38.1	16.0	0.23	15	15.23	4,823	4839
31-10-2013	37.9	2.8	2.64	2.2	4.84	1,525	1530
30-11-2013	37.9	0.3	4.539	2.8	7.339	2,312	2320
31-12-2013	37.9	0.4	5.444	3.8	9.244	2,912	2922
31-01-2014	38.5	1.0	0.11	2.4	2.51	803	806
28-02-2014	38.5	2.2	5.29	3.9	9.19	2,941	2951
31-03-2014	38.7	4.1	3.71	6.1	9.81	3,156	3166
30-04-2014	40	3.2	2.871	7.2	10.071	3,349	3360
31-05-2014	41	0.0	2.64	4.5	7.14	2,433	2441
30-06-2014	39.9	0.7	4.241	2.7	6.941	2,302	2310
31-07-2014	39.6	0.4	2.669	1.6	4.269	1,405	1410
31-08-2014	39.4	0.0	3.237	2.1	5.337	1,748	1754
30-09-2014	39.2	0.0	7.363	3.2	10.563	3,442	3453
31-10-2014	39.4	0.0	3.493	2.4	5.893	1,930	1936
30-11-2014	39.5	0.4	3.11	2.2	5.31	1,743	1749
31-12-2014	40	0.8	3.099	4.1	7.199	2,394	2402
31-01-2015	39.7	1.8	3.484	4.1	7.584	2,503	2511

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
28-02-2015	39.4	2.1	2.41	5.3	7.71	2,525	2533
31-03-2015	39.3	3.8	1.149	5.9	7.049	2,303	2310
30-04-2015	38.8	2.8	1.446	4.1	5.546	1,789	1795
31-05-2015	37.4	2.5	2.062	5.6	7.662	2,382	2390
30-06-2015	37.4	1.8	1.323	5.3	6.623	2,059	2066
31-07-2015	37.1	5.6	3.08	6.2	9.28	2,862	2871
31-08-2015	36.7	0.0	5.16	2.8	7.96	2,428	2436
30-09-2015	36.6	0.4	3.311	4.3	7.611	2,316	2323
31-10-2015	36.2	0.8	4.686	3.5	8.186	2,463	2471
30-11-2015	35.8	0.6	5.96	3.2	9.16	2,726	2735
31-12-2015	35.2	0.9	4.91	2.1	7.01	2,051	2058
31-01-2016	35	1.8	0.088	3.9	3.988	1,160	1164
28-02-2016	35.5	3.4	1.51	7.1	8.61	2,541	2549
31-03-2016	35.3	2.7	2.379	4.5	6.879	2,018	2025
30-04-2016	34.5	3.2	0.935	3.2	4.135	1,186	1190
31-05-2016	34.3	0.0	2.043	2.8	4.843	1,381	1385
30-06-2016	33.6	0.7	0.989	3.5	4.489	1,254	1258
31-07-2016	33.1	0.5	0.88	5.8	6.68	1,838	1844
31-08-2016	33.1	0.8	1.431	3.4	4.831	1,334	1334
30-09-2016	32.9	0.0	4.983	6.5	11.483	3,151	3151
31-10-2016	32.9	0.0	1.822	4.5	6.322	1,735	1735
30-11-2016	32.9	1.0	0.455	4.5	4.955	1,360	1360
31-12-2016	32.6	1.8	0.161	2.8	2.961	805	805
Existing Permit Limit	Report	Report	Report	Report	Report	Report	
Minimum	32.9	0.0	0.0	1.0	1.0	410	411
Maximum	56.3	10.0	7.6	13.0	14.4	4632	4648
Average	41.2	1.5	2.6	3.1	5.7	1924	1930
Standard Deviation	4.5	1.8	1.5	2.2	2.2	711	714
No. Measurements	163	163	163	163	163	163	163

Date	Rolling Annual Average Flow	Ammonia [as N]	Nitrite + Nitrate total [as N]	Nitrogen, Kjeldahl, total [as N]	Total Nitrogen	Total Nitrogen	Total Nitrogen (based on rolling annual average flow)
	Million Gallons per Day	mg/l	mg/l	mg/l	mg/l	lbs/day	lbs/day
No. Exceedances	NA	NA	NA	NA	NA	NA	NA

Response 28

EPA notes the comment for the record. EPA did not include ammonia data in Attachment H as the ammonia measurements are not used to calculate total nitrogen. Rather, total nitrogen is the sum of the nitrate, nitrate and TKN measurements. The comment does not provide any basis for revising any particular condition of the permit, so none has been made as a result of this comment.

Administrative Items:

Comment 29

Asset Management: SWSC understands the importance of an adequate O&M plan, as contained in the draft permit Part D.b., page 16 of 24. However, even the best O&M plan will not prevent system failures, mechanical breakdown or sewer line failure if the infrastructure is beyond its useable life. For this reason, a robust asset management plan is essential.

Request: SWSC requests that EPA recognize the importance of asset management planning and include the option for the permittee and co-permittees to include asset management planning as part of their O & M manual.

Response 29

EPA agrees that asset management planning is essential for ensuring the long-term sustainability of the wastewater collection system and encourages the Permittee and Co-permittees to consider asset management as a component of their operation and management plans. While the permit includes minimum requirements for the O&M plan, there are no prohibitions against including additional information, such as asset management planning, from being included. No change to the permit was made as a result of this comment.

Comment 30

Submittal of Report Due Dates and as NetDMR Attachments. Throughout the draft permit are numerous references to annual reports and their due dates. A partial listing is shown below:

Compliance Task	**Annual Due Date**
Design Flow Compliance Report (if annual average flow exceeds 80% of design flow in a calendar year)	April 30
CSO Monthly Inspection Reports	April 30
CSO Monthly Inspection Certification	April 30
Annual Summary Report of Collection System O&M Plan Activities	April 30
Annual Report for 40 CFR Part 503	February 19
Pretreatment Program Annual Report	March 31
Nitrogen Optimization Report	February 1
CSO Abatement Report	April 30

Request: In order to manage this number of reports and requirements, to the extent feasible, SWSC requests that all annual reports share a common due date of April 30.
With respect to page 21 of 24 Part I.2, where submittal of reports shall be as NetDMR attachments, please be advised that several annual reports, or the combination of all annual reports on April 30th, may be a large file, and may not be feasible to transmit electronically.

Response 30

The date for submitting the annual Nitrogen Optimization Report has been maintained as February 1st in the Final Permit, as this date will allow for any modifications in treatment plant operations that may have been identified during the preparation of the report for the previous calendar year to be made prior to the start of the growing season. Additionally, 40 CFR Part 503 requires the February 19th deadline for submitting the annual Biosolids/Sludge Report by February 19th, and therefore, may not be changed. The date for submitting the annual pretreatment report has been changed to April 30th in the Final Permit.

The Permittee should contact EPA Region 1's ECAD for compliance assistance if it encounters difficulty in submitting files on NetDMR.

Comment 31

Attachment D Accuracy: Attachment "D" to the draft permit is a chart showing "CSO overflow events, and volume (in 1,000's of gallons), as reported by SWSC." It appears that the numbers generated are not in 1,000s of gallons, as indicated by the title. For example, 042 at SRWTF in 2016 shows that approximately 6.4 billion gallons of flow was bypassed (6,435,000 x 1,000). EPA should review this chart for accuracy.

Response 31

The notation for the CSO discharge volumes that was presented in Attachment D to the Fact Sheet (not the Draft Permit) should have been "gallons", and not "1,000's of gallons", as pointed out by the commenter. This correction is noted for the record (Fact Sheets are not modified following the public comment period).

Comment 32

Permits Superseded: In numerous locations throughout the permit and the Fact Sheet, EPA refers to the draft permit superseding the permit signed on December 8, 2000 yet fails to state that the permit also supersedes the CSO permit signed on September 30, 2009.

Request: The permit and Fact Sheet should clearly identify that both permits will be superseded.

Response 32

As pointed out in the above comment, this permit supersedes both NPDES Permit No. MA0101613, signed December 8, 2000, as well as NPDES Permit No. MA0103331, signed September 30, 2009. This correction has been made to the cover page of the Final Permit.

The clarification that the Final Permit supersedes both NPDES Permit No. MA0101613, signed December 8, 2000, and NPDES Permit No. MA0103331 is noted for the record.

Comment 33

Typographical Error: On page 14 of 24, section D.2 "Preventative Maintenance," the draft permit states: *"The permittee and co-permittees shall each will maintain an ongoing preventative maintenenace program to prevent…"*

It appears "shall each will" is a typographical error.

Request: Please revise the language as shown: "The permittee and co-permittees shall each ~~will~~ maintain an ongoing preventative maintenenace program to prevent…"

Request: SWSC requests that these terms be defined at the Federal level.

Response 33

Part I.D.2. of the Final Permit has been clarified to read as follows: "The permittee and co-permittees shall each maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure".

It is unclear what terms the commenter would like to have these terms defined, or why it believes they are unclear or ambiguous. The provision is comprised of words that can be

understood using their ordinary, everyday meaning, or in the case of 'bypass,' by its federal definition at 40 CFR §§ 122.2 and 122.41(m).

Comment 34

Update Administrative Record: In the Fact Sheet page 8, Part VI, the populations listed for the customer towns is incorrect. The correct population numbers in accordance with the more recent (2010) census data are:

Springfield	154,074
Agawam	28,438
West Springfield	28,391
Ludlow	21,103
Longmeadow	15,784
East Longmeadow	15,720
Wilbraham	14,868
Chicopee	1,000

Requested Resolution: Please revise the Administrative Record to reflect the updated census data.

Response 34

The clarification provided in the above comment is noted herein and is part of the administrative record.

VI. Testimony Provided by Joshua D. Schimmel, Executive Director, SWSC, April 24, 2018

Comment 35

Thank you. Josh Schimmel, Springfield Water and Sewer Commission, Executive Director. I'd like to thank everyone for the opportunity to provide comments and for participating in the process. Public participation is critically important to us and it really provides us with insightful perspective to help inform our decision making down the road. So, you know, the process is really important to us.

Also, understand some of the comments that we have provided and will provide tonight. And later in the weeks -- we're providing these. They need to be taken into the context of our core mission which is sustainably providing safe, reliable and affordable water and sewer services to these communities, which is 33 percent of the total population of western Massachusetts.
So, we offer the following comments.

On nitrogen, we understand, as it was stated by EPA tonight, that Massachusetts is meeting the existing TMDL for nitrogen. Our plant has reduced nitrogen load by 50 percent prior to the TMDL.

And so, when the TMDL was being developed and we knew it was coming, we undertook a program to reduce our nitrogen by 50 percent.

So when that TMDL was developed, we were producing about 20 milligrams per liter. And now, we're down to 10 milligrams per liter. So, we've been ahead of the curve on many things, including nitrogen over the years.

And most importantly, we really support increased sampling at the treatment plant, as well as other treatment plants and the receiving water bodies to help better inform future rule making, such as the development of a new TMDL which we think is really important.

On blending, based upon the EPA announcement last week that a new rule making process has been initiated on blending, we feel that there should be no further restrictions or changes in the permit regarding blending in the Final Permit.

On public notification, we would ask for flexibility in developing a community specific notification program. We feel the prescriptive nature of the language does not reflect the specific needs for our community and those downstream. And we'd be happy to work with the stakeholders on that.

On the reclassification of Outfall 042 as a CSO, we would maintain that the reclassification is outside the definition of a CSO and is clearly part of the treatment works after flows enter the treatment plant.

And on the co-permittee status, as expressed in our written comments, we have concerns with the lead role obligations of the co-permittee and the commission.
Those are our comments for tonight. Thank you.

Response 35

EPA's responses to the concerns raised in the hearing testimony that pertain to co-permittees, nitrogen, public notification and the reclassification of outfall 042 are found elsewhere in the Response to Comments, including Response 1 (co-permittees), General Response (nitrogen), Response 39 (public notification), and Response 3 (reclassification of outfall 042).

With respect to blending, the comment references EPA's August 2018 announcement of public listening sessions to examine issues associated with the management and treatment of peak flows during wet weather events at publicly owned treatment works (POTWs) served by separate sanitary sewer systems. The scope of this proposed rulemaking is clearly established in the Federal Register Notice which was published on August 31, 2018. Specifically, the Federal Register Notice states that "The Environmental Protection Agency (EPA) is interested in the views of the public on possible approaches to updating the National Pollutant Discharge Elimination System (NPDES) regulations related to the management of peak wet weather flows at Publicly Owned Treatment Works (POTWs) treatment plants serving *separate sanitary sewer collection systems*" (emphasis added). 83 Fed. Reg. 44623 (August 31, 2018). Therefore, in addition to not being a final rule, this preliminary regulatory effort is not applicable to the SWSC because it owns and operates a combined wastewater collection system.

VII. Comments Submitted by Joshua D. Schimmel, Executive Director, SWSC, by Letter Dated April 27, 2018

Comment 36

Nitrogen: SWSC remains concerned regarding the manner of implementation of the Long Island Sound (LIS) Total Maximum Daily Load (TMDL) in the Permit, which has neither legal basis nor technical merit. As stated in the TMDL "the CWA (Clean Water Act) Section 303(d) requires the establishment of TMDLs that will result in the attainment of water quality standards." (p.25). Until or unless the TMDL is updated, the basis for load and wasteload allocations for total nitrogen (TN) as detailed in the TMDL, both in-basin and out-of-basin, represent the best scientific and legal approach for meeting water quality standards in the LIS.

It is important to understand that the adopted LIS TMDL requires an out-of-basin wasteload target TN reduction of 25% of the baseline load (the estimated point source loads in 1990). The out-of-basin TMDL point source load for Connecticut River basin (ConnPSTMDL) can be expressed as:

$$ConnPS_{TMDL} = BaselineLoadPS_{1990} \times (1 - 25\%)$$
$$BaselineLoadPS_{1990} = 21{,}672\ lbs/d$$
$$ConnPS_{TMDL} = 21{,}672 \times (1 - 25\%) = 16{,}254\ lbs/d$$

The adopted LIS TMDL identifies the baseline load for the Connecticut River as 21,672 lbs/day. A 25% reduction in that load equates to a target aggregate wasteload allocation of 16,254 lbs/day for point sources in the "out-of-basin" (i.e., upstream of the State of Connecticut) portion of the Connecticut River. This target load of 16,254 lbs/day remains unchanged since the TMDL was established in 2000 and approved in 2001. Unless and until a revised TMDL is duly promulgated, the SWSC's responsibility under the CWA is to comply with the current, adopted TMDL.

As early as 2004 to 2005, TN loadings to the Connecticut River were estimated to be 13,836 lb/day. This loading estimate, based on effluent data, indicated that the TMDL target for out-of-basin TN wasteload from the Connecticut River had been achieved. In fact, the TN loading to the Connecticut River from out of-basin sources far exceeded its target of 25% reduction, and in actuality achieved approximately 36% reduction over baseline levels.

Clearly the TMDL out-of-basin targets for the Connecticut River have not only been achieved but have been generously exceeded.

The above notwithstanding, the EPA here proposes to modify the identified TMDL target from the 25% reduction required by the approved TMDL, to a variety of other targets (described as three alternatives). Further, the Permit then invites the public to evaluate the technical merits of those choices, as well as to develop still more alternatives to the duly promulgated TMDL point source loading target.

We strongly object to this approach as it does not meet the requirements or intent of the Clean Water Act. Instead of requiring SWSC to maintain compliance with the 25% reduction goal, the Permit suggests three alternatives on which the public is invited to provide technical evaluation and suggestions:

1) Assign a loading benchmark of 2,279 lbs/day, based on EPA's estimate of the SRWTF's current annual average loads (using 2012-2016 data);

2) Assign a loading benchmark of 2,534 lbs/day based upon EPA's estimate of the SRWTF's maximum annual average loads (using 2012-2016 data), along with a concentration benchmark of 8 mg/L as an annual average; or

3) Assign a benchmark concentration of 8 mg/L as an annual average.

In addition, some commenters have suggested that the SRWTF receive an even more stringent annual average load of 1,648 lbs/day, based upon USEPA's estimate of SRWTF's annual average loading for the years 2004-2005. The use of this loading snapshot is inappropriate to establish nutrient loading limits, as USEPA has recognized in their preparation of the draft Permit and as referenced at the public meeting on April 24, 2018. It does not represent the most recent data available to the Agency at the time of permit renewal. Moreover, this benchmark and all of the loading benchmarks suggested by USEPA and commenters on the permit are arbitrary and are not in any way connected to the TMDL requirements or aggregate wasteload allocation for the out-of-basin point sources.

Future increases in flow to the plant, which will be realized through planned capital projects and potential expansion of regionalization, will also contribute to an increase in annual loading. SWSC's annual nitrogen load will increase as its discharge flow approaches its permitted capacity. This is not inconsistent with the TMDL, since, even at its permitted flow of 67 MGD, SWSC will be discharging less than its flow-weighted share of the allowable out-of-basin TMDL load through the Connecticut River. SWSC achieved compliance long before the 2004-2005 loading snapshot was taken. Establishing a nitrogen loading limit that does not recognize the full potential (i.e., permitted flow) of the treatment plant would be shortsighted. Utilizing a concentration benchmark, on the other hand, will allow the Commission to retain the full treatment potential of the SRWTF while still ensuring its nitrogen load remains below its share of the aggregate out-of-basin wasteload allocation for the Connecticut River basin.

SWSC strongly objects to EPA's attempt to modify the approved and adopted TMDL requirements through the issuance of a permit. In order to avoid a protracted disagreement, which would entail additional expense to our ratepayers, the SWSC is willing to accept Alternative 2 as identified in the Permit, which would impose an average annual optimization concentration benchmark of 8 mg/l as an annual average. We note that this option would ensure that SRWTF will not have any potential to exceed the TMDL threshold concentration of 9.71 mg/L, which is the concentration associated with its allowable TMDL load when discharging at its maximum permitted flow.

Further, as stated in the LIS TMDL, Section VII.F, "A critical component of phased implementation is the reassessment of management goals and actions based on new information. The LISS Phase III

Actions for Hypoxia Management also contains commitments to formally evaluate the 58.5 percent reduction target every five years." As part of that reassessment, the TMDL requires an evaluation of the progress of implementation, improvements in nitrogen removal technology and pilot projects, review of states' water quality standards and their possible revision among others. Finally, the TMDL requires "…New York and Connecticut will review and revise the TMDL based on this assessment by August 2003." Please provide the status of that review, as well as the subsequent every five-year review since adoption. We request that EPA complete the update to the TMDL. Until such an exercise is undertaken, the SWSC's responsibility under the CWA is to comply with the current, adopted TMDL.

Response 36

See General Response.

Comment 37

Reclassification of Outfall 042: SWSC affirms our objection to the reclassification of Outfall 042 from an emergency plant bypass to a Combined Sewer Overflow (CSO). EPA's National CSO Policy defines a CSO as the discharge from a combined collection system prior to the treatment plant. Since Outfall 042 is located after the Plant Inlet Structure, and after preliminary mixing of flows, Outfall 042 is clearly not a CSO.

Response 37

See Response 3.

Comment 38

Blending: In light of the April 17, 2018 News Release by EPA: "EPA Announces Effort to Update Wet Weather Regulations for Wastewater Treatment Plants," SWSC requests that there be no new restrictions in the Permit relative to operation of the secondary bypass at the SRWTF until this rule-making process is concluded.

Response 38

See Response 35

Comment 39

Public Notification Plan: Regarding the public notification plan, SWSC would like to continue to work with our communities to provide effective notification to the public and meaningful access to the status of CSO discharges. We urge EPA to provide the flexibility for us to proceed in this direction, rather than imposing the "one-size-fits-all" requirements currently contained in the draft permit.

Response 39

EPA sought to strike a balance in fashioning the draft permit requirements for the minimum implementation level for NMC #8 (Public notification to ensure that the public receives

adequate notification of CSO occurrences and impacts). As contemplated by NMC #8, the public notification plan affords the Permittee reasonable flexibility in implementing the plan to account for facility-specific concerns (e.g., logistics in obtaining and disseminating information in a timely and efficient manner given funding and staffing resources), while at the same time ensuring that important health and safety information is disseminated to the public in a timely manner. *Combined Sewer Overflow, Guidance For Nine Minimum Controls*, at 9-1 (EPA 1995) ("The measure selected should be the most cost-effective measure that provides reasonable assurance that the affected public is informed in a timely manner.".)

EPA supports the Permittee's objective of collaborating with other communities in developing a public notification plan and there is nothing in the Draft Permit that would preclude the Permittee from doing so. Part I.B.3.g. of the Draft and Final Permits establishes the minimum information that must be included in the public notification plan and does not restrict the Permittee from expanding upon these minimum requirements in order to address the specific needs of the community and/or to enhance the public notification plan. Part I.B.3.g. of the Final Permit remains unchanged from the Draft Permit.

Comment 40

Co-Permittee: SWSC remains concerned regarding the provisions relating to co-permittees as they create uncertainty surrounding roles and responsibilities within the Permit itself. This not only creates confusion in the enforceability of the Permit, but also potentially complicates the positive working relationships we currently have with our customer towns.

Response 40

EPA has clarified certain portions of the final permit to further delineate the respective roles of the co-permittees. See also Response 1.

VIII. Comments Submitted by Joshua D. Schimmel, Executive Director, SWSC, by Letter Dated October 15, 2018

Comment 41

On February 9, 2018, the Springfield Water and Sewer Commission (SWSC) submitted comments on the draft National Pollutant Discharge Elimination System (NPDES) permit (Permit), dated November 15, 2017, for the Springfield Regional Wastewater Treatment Facility (SRWTF). On April 2, 2018, SWSC submitted additional comments on the Permit to supplement our February 9, 2018 submission based upon the public hearing. SWSC takes this opportunity to submit comments on the Revised Draft Permit.

The SWSC owns and operates both the SRWTF and the combined sewer collection system, which includes 23 combined sewer overflow (CSO) outfalls within the City of Springfield. It also operates and maintains 33 pumping stations and 475 miles of collection system pipe. In addition to the named

permittee (SWSC), the Revised Draft Permit is also issued to six co-permittees: the towns of Agawam, East Longmeadow, Longmeadow, Ludlow, West Springfield, and Wilbraham.

The SWSC has expended considerable resources to compile meaningful and constructive comments in order to provide EPA with additional information to consider in finalizing this NPDES Permit. This permit is considered to be critically important to the out-of-basin watersheds tributary to the Connecticut River in Massachusetts, New Hampshire, and Vermont. As a result of the impact on the SWSC's NPDES permit, the SWSC has closely followed EPA's Long Island Sound (LIS) Nitrogen Reduction Strategy. The SWSC has been openly critical of EPA's decision to not include the out-of-basin POTW community in its strategy development as well as EPA's failure not to require the collection of new, relevant data in determining both the out-of-basin nitrogen impacts on LIS and the effectiveness of nutrient reduction programs in New York and Connecticut.

The SWSC is re-affirming its request that the TMDL for LIS be updated before any new enforceable limits are implemented for out-of-basin POTWs. As has always been the case, the SWSC's priorities has been balancing regulatory compliance and infrastructure investment across all areas of its system, and maintaining reliable service at an affordable cost to our customers. With aging infrastructure, Combined Sewer Overflows (CSO), and now nutrients as our biggest challenges, there is no room to invest in approaches or infrastructure without proven and verifiable outcomes.

Data is the driving force in the SWSC's decision-making, unfortunately we have grave concerns that there is not enough data supporting the decision to include an enforceable Total Nitrogen limit in this permit. We see no supporting documentation from CT DEEP or others that would support moving from what was originally proposed as an optimization goal to an enforceable limit, especially given that the LIS Nitrogen Reduction Strategy implementation and findings are incomplete and the TMDL has yet to be reviewed let alone updated since 2000.

Diverting funds from aging infrastructure and CSOs to fund nitrogen reduction strategies that may not have any impact on LIS would significantly impact the SWSC's ability to provide the expected level of service and concurrently maintain regulatory compliance. For this reason, the SWSC partnered with the United States Geological Survey (8) and Massachusetts Department of Environmental Protection (MassDEP) to install monitoring equipment and sampling programs to better understand the impacts and fate of nitrogen in the Connecticut River.

To be clear, the SWSC fully supports the LIS initiative in its clean water efforts and has proposed additional financial support to gather data to make informed decisions to that effect. However, we cannot support, and our ratepayers simply cannot afford, infrastructure investment driven by outdated data and unsupported documentation as part of a NPDES Permit. This draft permit is being issued with little to no updated information for the out-of-basin tributary areas of Massachusetts, New Hampshire, and Vermont. Yet EPA is proposing to move ahead with a permit, that if applied consistently across the watershed, could result in hundreds of millions of dollars of investment in nitrogen reduction with no certainty of benefit.

The SWSC has a long history of supporting EPA initiatives, working closely with the agency on compliance issues, and being a leader in this region in collaborating with other POTWs and agencies in solving complex environmental issues. The SWSC is concerned that the Revised Draft Permit as

written is not only unsupported by relevant data, but would eliminate opportunities for innovative and regional solutions to both the nitrogen issue in LIS as well as other critical wastewater challenges.

Listed below are additional comments with respect to the Revised Draft Permit, for consideration together with our previous comments:

Response 41

EPA disagrees that there are not enough data to include a TN limit and disagrees that the TMDL needs to be revised prior to including numeric effluent limits. The Final Permit is supported by relevant data. See the General Response. EPA sees no reason why the Final Permit would eliminate opportunities for innovative and regional solutions to any issue. EPA further addresses these issues in responding to the commenter's additional comments below.

In all permitting actions, EPA uses the best information reasonably available at the time permit issuance and encourages the collection of new data and development and refinement of analytical tools to assess those data. The decision to revise the TMDL, should cause exist to do so, lies in the first instance with the States rather EPA. Upon submission of any revised TMDL by the States, EPA will review it and approve, or disapprove it. Given the enormous size and complexity of the watershed, any such revision would entail a very significant commitment of technical, legal and administrative resources over an extended period time. There have been efforts over the past decade or more to revisit, reassess and possibly refine certain aspects of the TMDL, and the States, impacted municipalities like the City of Springfield, and other stakeholders are to varying degrees pursuing these measures. EPA encourages these initiatives, while recognizing the immense complexity associated with coordinating and building consensus among the five States and dozens of communities implicated by the LIS TMDL. In the meantime, consistent with its obligations under the CWA, which require permits to be revisited at regular intervals and permit effluent limitations to be written based on the best information reasonably available at the time of permit issuance, must proceed with reasonable dispatch to address nitrogen pollution in these ecologically critical—and impaired—waters, and not forestall such efforts in anticipation of newer data, analysis or regulatory determinations that may or may not materialize. To that end, EPA has relied new data collected since the TMDL as well as studies that have been done to analyzed fate and transport of nitrogen in the Connecticut River, new analyses of point sources loadings as well as ongoing assessment of the Long Island Sound, as described in section III of the General Response.

Comment 42

Pages 12-13 of 25, Public Notification Plan (Part I.B.3.g (sub parts 1-4)): Detailed comments are provided below:

a) Submittal Date for Public Notification Plan: The January 2018 Draft Permit required submittal of the Public Notification Plan within 90 days of the effective date of the permit (EDP), with implementation required at 180 days from EDP. The Revised Draft Permit now proposes plan submittal and plan implementation both be completed at EDP+180 days.

SWSC takes exception that EPA has failed to address the issues raised in our January 8, 2018 letter. Detailed comments were provided to EPA previously, demonstrating implementation of a public notification plan in EDP+180 days is simply not feasible.

See comment 4.b of our February 9, 2018 comment letter and incorporated herein by reference. SWSC again asserts that a minimum of 36 months is needed to develop and implement a meaningful public notification plan.

The development and implementation of an extensive public notification plan, particularly the implementation of a web-based notification system, simply cannot be achieved within 180 days. Notwithstanding the significant degree of effort involved in developing the web-based notification system, SWSC's and the Commonwealth of Massachusetts procedures for bidding and procurement are extensive and require adequate time for each phase of the design, construction bidding, award, and implementation process. These procedures include, but are not limited to: budgeting and obtaining funding from our Board, procurement of engineering services to assist in the program development and design, development and bidding plans and specifications, advertising and bidding process, and contract award – all of which must occur prior to beginning work on the contract.

Additionally, EPA, in a recent rule adoption for CSO dischargers in the Great Lakes, states that a public notification plan is not enforceable unless contained within an adopted permit. Specifically, EPA states:

> *"The details and content of the public notification plan, however, are not enforceable…unless the document or the specific details of the plan are specifically incorporated into the permit. Under the final rule, the contents of the public notification plan are instead intended to provide a road map for how the permittee <u>would comply</u> with the requirements (emphasis added)...The details within the plan will also assist NPDES permit writers in establishing corresponding public notification permit conditions." (January 8, 2018 Federal Register p.723).*

Clearly, EPA intends that a public notification plan be submitted and reviewed by the permitting authority prior to implementation. Implementation could then be accomplished under a future NPDES permit renewal or permit revision.

SWSC understands it is a cumbersome and lengthy process for EPA to require submittal of the plan, review the plan, then once again issue a draft major modification to the SWSC NPDES permit to incorporate the requirements of the plan. In order to provide EPA with a less resource intensive process, SWSC suggests submission and implementation of the Public Notification Plan within this permit cycle, and without the need for an additional permit modification, provided that SWSC's submission and implementation schedule proposed below is accepted:

<u>Request:</u> SWSC suggests the following timeline in this Revised Draft Permit:

- EDP + 12 months: SWSC shall submit to EPA a public notification plan;
- Twenty-four (24) months following EPA and MassDEP approval of the submitted plan, SWSC shall implement the approved notification plan.

b) Public Parties Notification: The Revised Draft Permit clearly identifies that public notification may be made through electronic means, "including posting to the Permittee's website." The ability to post public notifications on a website will provide for a much timelier, and ultimately more accurate, public based notification system for CSO overflows. However, SWSC raises the following concerns/comments which require clarification or modification, as appropriate;

i. Part 1.B.3.g.1 of the Revised Draft Permit requires CSO activation and cessation notification be provided to "the public...public health departments...any other potentially affected entities, including downstream communities, whose waters may be affected by discharges from the Permittee's CSO."

ii. Part 1.B.3.g.2 and 1.B.3.g.3 of the Revised Draft Permit requires CSO notification to "any other potentially affected party…"

SWSC asserts that public notification on the website is sufficient to provide a 24/7 real-time notification to the public, inclusive of all "categories" of the public. It is unclear why EPA has specifically identified "public health departments …downstream communities… and other potentially affected entities" as a separate category from "the public." A requirement to separately notify unidentified third parties, or unnamed downstream communities is vague and not implementable.

Request: Clarify that notification of CSO events on the website meets the requirements of this section through the following revision (deletions in ~~strike through~~; additions in underline):

> **1.B.3.g.1**: Within ~~180 days of the effective date of the permit,~~ 24 (twenty-four) months of ~~the permittee shall submit to~~ EPA and MassDEP's approval of a Public Notification Plan describing the measures that will be taken to meet NMC #8 in Part I.B.2. of this permit (NMC#8), the permittee shall implement said plan. The public notification plan shall include the means for disseminating information to the public, including communicating the initial and supplemental notifications required in Part I.B.3.g.2. and 3 of this permit, ~~as well as procedures for communicating with public health departments and any other potentially affected entities, including downstream communities, whose waters may be affected by discharges from the Permittee's CSOs.~~
>
> **1.B.3.g.2**: Initial notification of a probable CSO activation shall be provided to the public ~~and other potentially affected party as soon as practicable~~, …
>
> **1.B.3.g.3**: Supplemental notification shall be provided to the public ~~and any other potentially affected party~~ as soon as practicable,

c) Initial CSO Notification Timing: Part 1.B.3.g.2 of the Revised Draft Permit requires initial notification of a probable CSO activation be provided to the public as soon as practicable, but no later than two (2) hours after becoming aware of the discharge.

In consideration of the significant number of CSOs (23) within the SWSC system, the varied locations of these CSOs, and staffing and resource constraints, SWSC requests that a four (4) hour initial notification be provided. This notification would be consistent with the timeframe EPA approved at 40 CFR 122.38(a)(2)(i) for CSO dischargers to the Great Lakes Basin. EPA has previously found that a four (4) hour notification *"balance(d)s the burden on CSO permittees with the public health benefit to the public receiving timely notification"* (EPA Response to Comments Essay #3.5-1).

To further support protection of the public and appropriate notification, in coordination with a 4 (four) hour notification, SWSC is willing to post a general notice on its website advising the public that large storms can trigger CSO events, and public health officials recommend avoiding contact with waterways during storm events and up to 48 hours afterward.

SWSC also requests that when reporting the CSO location, SWSC should be able to do so in the manner EPA has previously approved under the Great Lakes rule 40 CFR 122.38(a)(2)(B): *"Where CSO discharges from the same system occur at multiple locations during the same precipitation-related event, …the CSO permittee may provide a description of the area in the waterbody where discharges are occurring…and the permittee is not required to identify the specific location of each discharge."*

Request: SWSC requests Part 1.B.3.g.2 of the Revised Draft Permit be modified as follows (deletions in ~~strike through~~; additions in underline);

> Initial notification of a probable CSO activation shall be provided to the public ~~and any other potentially affected party~~ as soon as practicable, but no later than ~~two (2)~~ four (4) hours after becoming aware by …."
>
> Where CSO discharges from the same system occur at multiple locations during the same precipitation-related event, SWSC may provide a description of the area in the waterbody where discharges are occurring, and SWSC is not required to identify the specific location of each discharge.

d) Supplemental CSO Notification Timing and Content:

Part 1.B.3.g.3 of the Revised Draft Permit requires supplemental notification to the public be provided as soon as practicable, but no later than 24 (twenty-four) hours after becoming aware of the termination of any CSO discharge(s). The notification shall include:

1. CSO number and location
2. Confirmation of CSO discharge
3. Total Volume discharged from the CSO
4. Date, start time and stop time of the CSO Discharge

SWSC provided extensive comments in our February 9, 2018 comment letter on the Draft Permit. See our previous comments item 4a, (pages 12-14), as well as comment 9 (pages 17-19) of our February 9, 2018 comment letter, which is hereby incorporated into this comment letter by reference.

Following is a brief summary of our objections to the supplemental notification, both the 24 (twenty-four) infeasible timeframe, as well as the extensive and excessive content:

- The notification requirements are excessive and go far beyond EPA's guidance "EPA's Combined Sewer Overflows Guidance for Nine Minimum Controls. Specifically:

  Section 1-7: *"The NMC are controls that…do not require significant engineering studies or major construction, and can be implemented in a relatively short period…"*

  Section 9-1: *"The intent of the eighth minimum control, public notification, is to inform the public of the location of the CSO outfalls, the actual occurrences at CSO, the possible health and environmental effects of CSOs, and the recreations and commercial activities…curtailed as a result of CSOs…"*

  Further, this EPA guidance gives specific examples of what is expected for notification at a CSO outfall:

    - *Posting at affected use area*
    - *Posting at selected public places*
    - *Notices in newspaper, radio, TV news… (etc.).*

- CSO cessation notification will give the public a false sense of security that the water is "safe" to use, when water impairments that impact human health may still exist due to stormwater runoff, illicit connections, etc.

- SWSC has not been able to consistently measure flow volume at its CSOs in spite of having flow meters with multiple sensors at every regulator, due to complex hydraulic structural configurations, tailwater conditions, surcharging, and other measurement interference.

- The current placement of flow meters within the SWSC system was intended to measure each overflow event at each of the individual 23 CSO locations as accurately as possible, with an understanding that under certain conditions the information is more qualitative than quantitative. The metering program is also designed to support and inform the modeling and analysis required under the Integrated Wastewater Plan and annual reporting programs. The contract covering the use of the flow meters will expire October 2020 along with the contract operations of the treatment plant. At that time, it is anticipated that the metering system design and intent will significantly change with a focus on modeling and expanded rain gauges rather than extensive metering.

- The notification requirements are costly in relationship to benefit. SWSC estimates that we have already spent in excess of $500,000 per year for our public notification plan (approximately $21,700 per CSO). Additional requirements, of questionable public benefit, will serve only to further reduce available funds that could otherwise be directed toward reducing CSO discharges.

- The requirement for flow duration, stopping and starting times and volume are more appropriately considered part of a CSO Annual Report.

- EPA has failed to establish what additional benefit is provided in terms of public notification and health, by estimating and publishing CSO volumes within 24 hours, versus the significant cost, and the inherent unreliability, of such numbers.

- CSO discharges are often discontinuous, and as a result, more than 24 hours is necessary to determine whether an event has ended.

Request: SWSC requests the Revised Draft Permit be modified to provide supplemental notification to the public in two stages. The framework for each stage is provided below; details will be provided in SWSC's CSO Notification Plan.

The first stage of the supplemental notification would be provided within 7 (seven) days following cessation of all CSOs (as opposed to 24 hours). By providing a longer time frame, SWSC will have the ability to better validate the information to be posted. Further, CSO discharges are often discontinuous, and more than 24-hours is necessary to determine whether the CSO event has actually ended.

Additionally, a 7 (seven) day notification would be consistent with the timeframe EPA approved at 40 CFR 122.38(a)(2)ii, for CSO dischargers to the Great Lakes Basin. As with the SWSC draft permit, EPA also initially proposed a 24-hour supplemental time-frame, however EPA revised the timeframe to 7 (seven) days upon adoption.

> *"EPA decided to extend the deadline from the proposed 24 hour-deadline to "within seven (7) days of the end of the CSO discharge….EPA also concluded that following the initial notification there is less urgency from a public health protection standpoint to supply the information in the supplemental notification, which in EPA's view supports a timeframe that is longer than 24 hours."* (EPA Response to Comments Essay #3.6-1).

This first stage supplemental notification shall contain the CSO number and location, and confirmation of discharge.

The second stage of supplemental notification will be provided in the SWSC annual report. This second stage notification contents will be detailed in our public notification plan, however SWSC will consider a listing of CSO events by date, estimated volumes, and correlated rainfall.

Specific request SWSC requests Part 1.B.3.g.3 of the Revised Draft Permit be modified as follows (deletions in ~~strike through~~; additions in underline):

> Supplement notification shall be provided to the public. ~~and any other potentially affected party a~~
>
> (1) As soon as practicable, but no later than, ~~twenty-four (24) hours~~ seven (7) days after becoming aware of the termination of ~~any~~ all CSO discharge(s). Notification may be made through electronic means, including posting to the Permittee's website. The supplemental notification shall include the following information:
>
> CSO number and location
> Confirmation of CSO discharge
>
> (2) The permittee shall provide additional information in its annual report including:
>
> Total estimated volume discharged from the CSO
> Estimated ~~D~~date, start time and stop time of the CSO discharge

e) Annual Notification:
Part 1.B.3.g.4 of the Revised Draft Permit requires SWSC to post annually, on a website, certain information relative to its CSO and to water quality. While SWSC has no objection to posting CSO location, status of CSO abatement work, and contacts for additional information on CSO and water quality, SWSC takes great exception to posting "additional information on…water quality on a website." Such "information on water quality" is vague and should be deleted.

In addition, to support our request under item 1.d., above, secondary notification, SWSC is willing to post annually on its website, the annual report containing individual estimated CSO discharge event date, start time and stop time, in addition to a summary of CSO activations and volumes.

Request: SWSC requests Part 1.B.3.g.4 of the Revised Draft Permit be modified as follows (deletions in ~~strike through~~; additions in underline):

4. Annual notification – Annually, by April 30th, the permittee shall post information on the locations of CSOs, a summary of CSO activations and volumes, a listing of CSO events that include estimated date, start time and stop time, status and progress of CSO abatement work, and contacts for additional information on CSOs ~~and water quality~~ on a website. This information shall be disseminated through the means identified in the Public Notification Plan that is submitted in accordance with Part I.B.3.g.1. of this permit.

Response 42

The Final Rule Public Notification for CSOs to the Great Lakes implements Section 425 of the Consolidated Appropriations Act of 2016, requires EPA to work with the Great Lakes

States to establish public notification requirements for combined sewer discharges to the Great Lakes. It does not apply to dischargers outside of that area. Local considerations present for this permit, such as the State of Connecticut's "real-time" notification requirement as described below, properly inform a different approach.

With respect to the concerns raised in the above comment regarding the submittal date for the public notification plan, EPA is not required to re-issue or modify the permit to incorporate the public notification plan once it is developed, as it is incorporated by reference into the permit. Both the requirement to prepare and submit such a plan, as well as the overall parameters of the plan, have been subject to public scrutiny. Additionally, although the Permittee must submit the public notification plan to EPA and MassDEP, the agencies do not approve these plans. Therefore, implementation of the public notification plan is not contingent upon receipt of EPA's and MassDEP's approval.

Although the Public Notification Requirements for Combined Sewer Overflows to the Great Lakes Basin, 83 Fed. Reg. 712, are not applicable to this permit, Region 1's approach is consistent with the passage cited by the Permittee regarding enforcement. EPA agrees that the details and content of the public notification plan to be developed by the Permittee are not themselves enforceable. However, pursuant to Part 1.B.2.a.8, the Permittee is directly required in the permit to provide the public with adequate notification of CSO occurrences and impacts in accordance with the more specific requirements contained in Part 1.B.3.g (e.g., initial notification within 2 hours, supplemental notification within 24 hours, etc). The Permittee's public notification plan provides the road map for how it intends to comply with those specific permit provisions. Importantly, however, it is the two permit provisions above which establish the specific, applicable non-numeric effluent limitations.

EPA recognizes the Permittee's concerns regarding the need for additional time than what was proposed in the revised Draft Permit for the development of a public notification plan that meets the requirements of the permit. Specifically, the commenter cites the need for additional time than what was proposed in the revised Draft Permit to secure funding, advertise and award a contract for the development of a web-based notification system and will provide the SWSC with additional time to continue evaluating electronic methods for monitoring CSO discharges (i.e., direct vs indirect measurement) and to select the method that will allow for the dissemination of accurate information in a timely manner. Therefore, Part I.B.3.g of the Final Permit has been changed from the draft to allow 12 months from the effective date for the development and submittal of a public notification plan to EPA and 24 months from the effective date of the permit to implement the plan. EPA understands that there will be procurement and logistical issues associated with preparation and implementation of the plan. EPA, however, must balance these concerns against the need to provide the public with adequate information relating to CSO discharges as soon as possible, especially in light of the human health and environmental concerns associated with these types of discharges. EPA has previously required other CSO communities to develop such plans in 12 months without issue. Accordingly, in light of all of the preceding, EPA has provided a total of 24 months in the final permit for implementation, but does not believe 36 months, as proposed by the Commenter, is necessary.

With respect to the commenter's request for clarification on "potentially affected parties", upon further consideration, EPA has determined that the notification requirements in the Draft Permit, including the requirements in Part I.B.3.g. to provide the general public with notification of CSO are inclusive of all categories of the public, and the references to "affected entities" and "affected parties" have been removed from Part I.B.3.g. of the Final Permit.

With respect to the concerns expressed in the above comment regarding the initial CSO notification timing, in consideration of the comments received on the 2017 Draft Permit regarding the impact that discharges from the SWSC's CSOs has on both the Massachusetts and Connecticut reaches of the Connecticut River and the need to include adequate notification requirements in the permit, EPA determined that requiring the initial notification of a probable CSO discharge be made no later than two hours after becoming aware that a discharge has occurred is reasonable given the uses of the receiving water, the proximity of the discharges to the Connecticut border, and the estimated time of travel from the discharges to the state border (which is approximately two hours). The State of Connecticut, which is immediately downstream of Springfield, currently has a "real-time" notification requirement for anticipated CSOs in statute and has developed a state sponsored website for the public to use to identify likely active CSOs. The estimated travel time from Springfield to the Connecticut border is two hours under average flow conditions. This requirement remains unchanged in the Final Permit.

Merely providing a description of the area in the waterbody where CSO discharges are occurring, as opposed to the specific location of each discharge, as requested by the commenter, would not be appropriate given the number of CSOs that are located within a relatively small geographic area, the uses of the receiving water which may be negatively impacted by discharges of untreated combined wastewater and the proximity of the downstream State of Connecticut. The requirement to provide information on the location of where a CSO discharge is occurring remains unchanged in the Final Permit.

EPA supports the Permittee's efforts towards providing the public with a general advisory about CSOs and recommendations from health officials, and the Permittee is encouraged to continue to provide this information as part of its public notification plan that is required by the Final Permit.

With respect to the commenter's concerns regarding the supplemental CSO notification requirements, Chapter 9-1 of EPA's Combined Sewer Overflow Guidance for Nine Minimum Control Measures, provides *examples* of potential measures for notifying the public of CSO discharge events. As stated in the guidance, this list highlights *potential* measures for notifying the public of CSO discharge events, and is not, as suggested in the above comment, an all-inclusive list of measures that may be taken for notifying the public of CSO discharges.

EPA disagrees with the commenter's recommendation to change the deadline for the supplemental notice from 24 hours to 7 days. In Region 1's experience with other CSO communities, providing supplemental notice within 24 hours provides the public with

important information necessary to inform the public of ongoing public health risks, particularly with regard to the termination of the CSO event. In recognition of the concerns raised by the Permittee with respect to the time needed for validation and post processing of flow data, the requirement to include CSO discharge volumes in the supplemental notification has been removed from the Final Permit. This information shall, however, be included in the annual report that is required by Part I.B.4. of the Final Permit. (see Response 43). Removing the flow requirement is an additional distinguish from the Great Lakes Basin approach, see 40 C.F.R. § 122.38(a)(2)(ii)(A), and further supports the Region's requirement for supplemental notice within 24 hours.

EPA disagrees with the commenter's statement that notifying the public of the cessation of a CSO discharge will provide a false sense of security that the water is safe. While water quality may be negatively impacted by non-CSO sources, including stormwater runoff, providing timely notice of CSO discharges is intended to allow the public to take steps to reduce potential exposure to pathogens associated with untreated wastewater. EPA does, however, encourage the Permittee to provide the public with information relative to the impacts of wet weather, including those due to stormwater and other non-CSO sources, on the quality of the receiving water as well as to public health. Additionally, EPA supports the collaboration between the Permittee and public health entities in communicating the health risks presented by untreated discharges of combined stormwater and wastewater.

With respect to the comment regarding the annual notification, the language in Part I.B.3.g.4. of the Final Permit has been modified to clarify that the annual notification shall include information on "*CSO impacts on water quality*". While not a requirement of the permit, the permittee is may include information relative to individual CSO discharge events (i.e., date, start and stop times, and flow volume discharged per event).

Comment 43

<u>Page 13 of 25, Part 1.B.4. Nine Minimum Controls Reporting Requirements:</u> Part 1.B.4 (sections 1-3) contains three CSO Annual Reporting Requirements. Requirement 1.B.4.1 and 1.B.4.3 have been retained from the previous Draft Permit. Requirement 1.B.4.2 is a new requirement. SWSC comments are below:

Part 1 and Part 3 (retained from the previous Draft Permit, but also re-proposed in this revision) require the submission of a description of activities related to the Nine Minimum Controls, and a summary of the number of CSO activations and volume of each discharge, respectively. SWSC provided extensive comments on these requirements in our February 9th, 2018 comment letter, and these comments are herein incorporated by reference.

Of significant concern is **Part 1.B.4.3** which states: *"A summary of the required information on the number of activations each year for each CSO as well as the volume of each discharge from each CSO."*

In the Revised Draft Permit Fact Sheet, page 5 of 5, Section <u>4.0 CSO Notification Requirements</u>, paragraph 2, states: *"…EPA is proposing a requirement in the Revised Draft Permit for the permittee to provide initial notification to the public of a probable CSO discharge…based on*

modeling estimates of discharges(s) based on rainfall (or other predictive modeling methodologies) rather than on actual CSO discharge measurement."

In this section of the Revised Draft Permit referencing initial CSO notification, **it is clear that EPA will accept the use of a model to determine CSO discharge events, rather than actual CSO discharge measurement.** SWSC acknowledges this clarity. Furthermore, the SWSC believes that accurately reporting and quantifying CSOs continues to be challenging in spite of advances in technology. It is for this reason that permittees should be able to utilize a variety of technologies to report CSO activity, including but not limited to, rain and flow metering, rainfall and flow modeling platforms, and other developing technologies such as artificial intelligence (AI) techniques.

Having to provide specific information as to each activation and each discharge is not consistent with other parts of the permit and fact sheet. Part 1.B.3.d, (which has not been modified as part of this draft revised permit), states: "The permittee shall quantify and record all discharges from combined sewer outfalls (NMC #9). Quantification shall be **through direct measurement)** (emphasis added).

SWSC recognizes the draft revised permit comment period is specific to those portions of the Draft Permit being modified, however inasmuch as the Revised Draft Permit Part 1.B.4, creates a conflict with Part 1.B.3.d, SWSC believes it is appropriate to raise that concern.

As previously submitted, SWSC objects to the reporting of measured volume and duration in hours for each event at every CSO. Extensive comments were provided in our February 9, 2018 Comment Letter, and SWSC reiterates our objections to flow measuring and monitoring that is far beyond the regulatory scope of the Nine Minimum Controls and represent a significant expense with limited benefit. See Comment 4, (pages 12-14) and comment 9 (pages 17-19) of our previous comment letter, which is hereby incorporated by reference.

Request: Revise Part 1.B.3.d to agree with Part 1.B.4, as follows (deletions in ~~strike through~~; additions in underline):

"The permittee shall quantify and record all discharges from combined sewer outfalls (NMC#9) utilizing EPA or other industry accepted methodologies. ~~Quantification shall be through direct measurement~~…."

Response 43

The commenter attempts to draw parallels between distinct requirements in the Revised Draft Permit which were developed to achieve different objectives: 1) Part I.B.3.g., which pertains to providing the public with timely notification of a *probable* CSO discharge so that appropriate precautions can be taken to minimize exposure risks associated with recreating on or near receiving waters into which CSO discharges occur, and 2) other provisions of Part I.B., which include the collection of data that will be used for determining compliance with permit limits and for evaluating the effectiveness of CSO controls. As indicated in Response 9, and further discussed below, the type(s) of information and data that is collected and reported under these provisions differs in the level of refinement that is necessary to meet the objectives of these permit conditions.

EPA has revised Part I.B. to clarify the monitoring and reporting requirements and remove redundancy. Specifically, the CSO monitoring and reporting requirements contained in Parts I.B.3.(e) I.B.4. the Final Permit have been modified to provide clarification. The requirements in Part I.B.4. and Part I.B.5. of the Draft Permit have been consolidated under Part I.B.4. of the Final Permit, which has been renamed "CSO Monitoring and Reporting".

Part I.B.3.e. of the revised Draft Permit, which is the minimum implementation level for NMC #9 (monitoring to effectively characterize CSO impacts and the efficacy of CSO controls), requires the quantification all discharges from each CSO through direct measurement. This information is to be recorded as set forth in Part I.B.4 of the Final Permit, which contains the nine minimum controls annual report requirements. The annual report shall include the CSO outfall monitoring data that is listed in the table in Part I.B.4. of the Final Permit (which was included in Part I.B.5. of the Draft Permit).

EPA maintains its position that the objective of the monitoring required under the nine minimum controls is to provide data that can be used to evaluate compliance with the technology based effluent limitations for CSOs (i.e., the nine minimum controls) that are set forth in the permit, the efficacy of the CSO controls that have been implemented and to validate the assumptions set forth in the Permittee's LTCP. It has been EPA and MassDEP's experience that direct measurement provides the most accurate indication of CSO activations. Therefore, the collection of data through direct measurement is essential for the regulatory agencies to conduct these evaluations. Forms of direct measurement may include, but are not limited to, metering of flows at each CSO outfall. Alternate approaches could include, for example, extrapolating the flow volume discharged through a CSO outfall from measurements of water levels in the interceptor sewers (or some other measured metric of a known quantity from which the flow volume could be derived). Therefore, the collection of data through direct measurement is essential for the regulatory agencies to conduct these evaluations. EPA does not believe there is a conflict between allowing use of modeling for purposes of the initial notification requirement of the permit, Part 1.B.3.g.2, and the reporting requirements of CSO events contained at Part 1.B.3.e and Part 1.B.4. The initial notification requirement serves a different purpose than the subsequent reporting requirements. EPA has allowed for modeling for the former in light of the import of providing notice as expeditiously as possible and the advantages that modeling can provide to serve that purpose.

EPA has revised Part I.B. to clarify the monitoring and reporting requirements and remove redundancy. Specifically, Parts I.B.4. and 5 of the draft Revised Permit have been consolidated under Part I.B.4. in the Final Permit.

Part I.B.3.g. requires the Permittee to provide the public with initial notification of a *probable* CSO discharge, a supplemental notification confirming whether there was, in fact a CSO discharge; and an annual notification which includes the information on the locations of CSOs, a summary of CSO activations and volumes, status and progress of CSO abatement work, and contacts for additional information on CSOs and their impacts on water quality on a website.

The initial notification shall include the date and time a of a probable CSO discharge as well as the outfall number and location from which the discharge is suspected to have occurred. The supplemental notification shall confirm the occurrence of a CSO discharge and shall also include the outfall number and location from which the discharge occurred as well as the date, start and stop times of the discharge. Providing timely notice of CSO discharges is intended to allow the public to take steps to reduce potential exposure to pathogens associated with untreated wastewater. The use of modeling or other estimation methods to predict the likely occurances of CSO discharges is appropriate for the purpose of providing the public with timely notification of a likely CSO discharge.

In recognition of the challenges that may be associated with validating, processing and interpreting CSO data collected through direct measurement within the time frames specified in the draft permit, the CSO monitoring and reporting requirements have been revised in the Final Permit. Specifically, the requirement in Part I.B.3.g.3. of the revised Draft Permit to report the total volume of flow discharged as part of the supplemental notification has been removed from the Final Permit. CSO discharge volumes shall be included in the annual notification as required by Part I.B.4 of the Final Permit. Similarly, the requirement to submit the CSO outfall monitoring requirements in Part I.B.5. of the Draft Permit has been changed from a monthly to an annual reporting requirement, as specified in Part I.B.4. of the Final Permit.

Comment 44

Page 4 of 25, Part 1.A.1 Total Nitrogen (TN) Reporting Units:

Comments 5-11, below, relate to the imposition of a TN loading limit. In addition to those comments, SWSC also objects to the manner in which the limitation is expressed in the effluent parameters table (Part 1.A.1) of the Revised Draft Permit.

The Revised Draft Permit appears to intend that SWSC meet a rolling 12-month annual average limit of 2,534 lbs/day of TN. However, Part 1.A.1 (Discharge Requirements Table) shows the 2,534 lbs/day numeric value listed, incorrectly, under the column for monthly average. EPA then uses a footnote to attempt to explain that this is not what is really required.

SWSC requests the table be revised to show the more accurate "report" under the monthly average column for TN loading. More appropriately, EPA could then either provide a column for annual average load on the table, or discuss the annual average load in the footnote. In this manner, there will be no inaccuracy in the effluent table.

Request: Revise the effluent limits table as discussed above, by removing 2,534 lbs/day from the Monthly Average column, and replacing it with "Report."

Response 44

EPA agrees that more clarity is needed regarding the monitoring and reporting of TN. As discussed in Response 22, footnote 9 to Part I.A.1. of the Draft Permit has been modified and

divided into two footnotes to clarify how the total nitrogen values are to be calculated and reported.

Comment 45

Page 4 of 25, Part 1.A.1, Total Nitrogen Monitoring Frequency Calculation:
Comments 5-11, below, relate to the imposition of a TN loading limit. In addition to those comments, SWSC also objects to the 24-hour composite sample monitoring requirement, as shown in the revised effluent Table 1.A.1.

As was previously detailed in our February 9, 2018 comment letter, EPA should clarify that total nitrogen reporting is a calculation, not an additional analyte for SWSC to analyze. Total Nitrogen is simply the sum of Nitrate + Nitrite and total Kjeldahl nitrogen, both of which are already required to be analyzed weekly in the Revised Draft Permit.
As per EPA's guidance on Total Nitrogen:
(https://www.epa.gov/sites/production/files/2015-09/documents/totalnitrogen.pdf)

> "There are three forms of nitrogen that are commonly measured in water bodies: ammonia, nitrates and nitrates. Total nitrogen is the sum of the total kjeldahl (ammonia, organic and reduced nitrogen) and nitrate-nitrite. It can be derived by monitoring for organic nitrogen compounds, free-ammonia, and nitrate-nitrite individually and adding the components together."

In addition to our comment on sample type for total nitrogen, we also request clarity with respect to the calculation of average monthly load for total nitrogen. See requested language below.

Request: Revise footnote 9 as shown below (deletions in ~~strike through~~; additions in underline):

Report monthly average and maximum daily total nitrogen concentration in mg/L~~. A total nitrogen concentration value shall be calculated on each day a total kjeldahl nitrogen (TKN) and a nitrate-nitrite value is sampled. The monthly average and maximum daily total nitrogen concentration values to be reported shall be determined using this data set~~.

~~Report~~ the annual average and monthly average total nitrogen mass loading in lbs./day. ~~A daily mass loading value for total nitrogen shall be calculated for each day a total nitrogen concentration value was calculated, and shall utilize the average daily flow recorded for that day. Report average monthly mass loading for total nitrogen as the summation of the daily mass loading values divided by the number of samples~~.

The limit is an annual average mass loading limit (lbs/day), which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average total nitrogen ~~mass loading value~~ for the reporting month and the monthly average total nitrogen ~~mass loading value~~ of the previous eleven months."

Response 45

See Response 22 and Response 44 regarding clarifications made to Footnote 9 to Part I.A.1. of the Final permit with respect to the calculation and reporting of total nitrogen as well as the annual average load limit.

Comment 46

Page 4 of 25, Part I.A.1. Total Nitrogen Discharge Limitation v Benchmark: EPA, in the 2017 Draft Permit, proposed a requirement to monitor and report total nitrogen concentrations and mass loadings, while optimizing system operation to meet an annual average mass-based TN "benchmark." Two additional alternatives were also proposed, both of which also proposed a mass-based TN "benchmarks."

In this draft revised permit, EPA is no longer proposing a TN Benchmark, but is now proposing to impose an annual average loading **effluent limitation**. In the Fact sheet, EPA has justified this decision based upon comments from CTDEEP and others, in which an effluent limitation was requested instead of a benchmark (see Revised Draft Permit Fact Sheet page 3 of 5).

As contained in our February 9, 2018 comments on the Draft permit, the LIS TMDL defines out-of-basin to mean outside of states that border the LIS. With regard to the Connecticut River, out of basin means the States of Massachusetts, Vermont and New Hampshire. The LIS TMDL proposes a "target" for out-of-basin point sources of a 25% reduction from a baseline nitrogen loading. This target was met and exceeded in 2004-2005. Nonetheless, EPA would like to ensure the target continues to be met, which can be achieved through any number of cooperative efforts outside of a NPDES permit and without an effluent limitation.

The above notwithstanding, EPA has chosen to implement this TMDL POTW aggregate target as an individual effluent limitation for SWSC WWTP. The revised permit fact sheet is presented as support for this decision based upon the LIS TMDL and comments from CTDEEP "and others". SWSC objects to the proposed imposition of an effluent limitation for the following reasons: (a) the LIS TMDL does not include an individual wasteload allocation (WLA) for SWSC WWTP; (b) EPA has failed to provide an adequate statement of basis for imposing a TN effluent limitation within the Fact Sheet; (c) LIS TMDL Out-of-Basin Target has been met (d) CT DEEP "and others" fail to provide a basis for an effluent limitation in accordance with federal regulations, and (e) EPA's failure to provide an adequate opportunity for public comment.
Our comments are detailed below:

a) Failure to establish a WLA: The 2000 LIS TMDL does not establish a WLA for the SWSC WWTP. Further, the TMDL does not establish a WLA for ANY individual out-of-basin discharger, although detailed, discharger-by-discharger WLAs are contained in the TMDL for New York and Connecticut (both in-basin) individual dischargers.

   Federal NPDES regulations require that effluent limitations be consistent with the applicable wasteload allocation in an approved TMDL (40 CFR 122.44 (d)(1)(vii)(B)):

Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.

The only significant reference to a reduction required from out of basin dischargers in the adopted TMDL, is not, in fact, a WLA, but a vague statement contained in Section VI.B.1: Allocation of the Out-of-Basin TMDL, which states:

"*Tributary nitrogen enrichment can be reduced by about 1,173 tons per year (delivered to Long Island Sound) through the application of through (sic) low-cost BNR retrofits of existing sewage treatment plant (resulting in a 25 percent reduction in point sources)…"*

Absent any WLAs for out-of-basin dischargers, EPA has created an effluent limitation by examining the effluent data from SWSC WWTP during the period 2012-2016. In so doing, EPA has failed to provide the technical and regulatory basis to support imposition of an effluent limitation eighteen years following adoption of the TMDL, thirteen years following attainment of the TMDL goal for out-of-basin dischargers, and in the absence of a WLA. Implementation of a TMDL is predicated upon an allocation of wasteloads and loads throughout the study area, in accordance with a model that predicts attainment of water quality standards. As stated earlier, individual WLAs are determined in a TMDL to allow for a distribution of such wasteloads, taking into account treatment plant design flow, actual flow, attenuation and other factors used to determine WLAs. The SWSC permit revision, however, proposes an effluent limitation in isolation of a model that includes the entire study area, in isolation of the reductions required of other out-of-basin WWTPs, and in isolation of the TMDL itself. This approach fails to ensure that the TMDL will not be exceeded or that there will not be a net increase of TN from other out of basin permittees or sources. It essentially targets the SWSC, whereas if the TMDL was updated, a universal approach could be applied with a broader opportunity for reduction solutions.

b) <u>Failure to provide adequate statement of basis for an effluent limitation in Fact Sheet</u>: EPA has failed to provide an adequate statement of basis in the Fact Sheet for the imposition of an effluent limitation for TN. The Fact sheet is significantly limited, providing only a statement on page 3 of 5, as a basis for an effluent limitation:

"as was pointed out in comments received from CTDEEP and other commenters, an optimization benchmark cannot provide assurance that the cumulative nitrogen load to the LIS will not exceed the out-of-basin (Massachusetts, New Hampshire and Vermont) point source wasteload allocation established by the LIS Total Maximum Daily Load ("TMDL")."

EPA's own regulations require that an adequate basis be established in a fact sheet. Specifically, a fact sheet shall include:

''a brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record by 40 CFR 124.9" See 40 CFR 124.8(b)(4).

"…the permitting authority must ensure that ''*effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.''* See 40 CFR 122.44(d)(1)(vii)(B).

EPA's Technical Support Document for Water Quality-based Toxics Control refers to the fact sheet regulations at 40 CFR 124.56 and states that *''the wasteload allocations along with the required long-term average and coefficient of variation used and the calculations deriving them must be included or referenced in the fact sheet. The permit limit derivation method used must also be explained in the permit documentation*.'' See EPA/505/2–90–001, March 1991, p.110.

When EPA proposed a total nitrogen "benchmark" goal in the Draft Permit, EPA provided an extensive basis and background in the Fact Sheet to link the imposition of a benchmark to goals contained in the LIS TMDL. Included in this benchmark basis are four pages of rationale, and additional data included in Appendix 3, Attachment G, and Attachment H – which is in excess of 19 pages of data and information (excluding Appendix A which could not be located). Yet the only additional information provided in the Fact Sheet for this permit revision, in which EPA proposes to impose an actual limitation, is a reference to a request to impose an effluent limitation from CT DEEP "and others,"
SWSC finds no evidence of the above cited regulatory requirements in the Revised Draft Permit Fact Sheet. Clearly, EPA has failed to establish a bridge from the Draft Permit Fact Sheet to the Revised Permit Fact sheet.

c) <u>LIS TMDL Out-of-Basin Targets Met:</u> As stated earlier, the TMDL requirements for out-of-basin dischargers are described in Section VI.B.1: Allocation of the Out-of-Basin TMDL, which states:

"*Tributary nitrogen enrichment can be reduced by about 1,173 tons per year (delivered to Long Island Sound) through the application of through (sic) low-cost BNR retrofits of existing sewage treatment plant (resulting in a 25 percent reduction in point sources)…"*

The TMDL continues:

"Given the scope and magnitude of this effort, the TMDL stresses implementation of the Phase III (in-basin) nitrogen reduction target and establishes <u>preliminary targets</u> and recommended actions for out-of-basin nitrogen source reductions and alternatives to nutrient control for improving water quality."

Clearly the LIS TMDL does not impose WLAs on individual dischargers from out-of-basin, and does not require out-of-basin WWTPs to have effluent limitations

SWSC objects to EPA imposing an effluent limitation for TN on out-of-basin discharger, with no WLA, in a watershed area that has already achieved the TMDL "target" of 25% reduction, and asserts this far exceeds the intent and scope of the LIS TMDL.

SWSC can find no substantiated data to demonstrate the 25% reduction in aggregative out-of-basin- nitrogen loads is not currently being achieved, and therefore no basis for EPA to assume it will not continue to be achieved utilizing the methods that are already in place. SWSC requests EPA to provide data and related studies that demonstrate failure of the out-of-basin states to maintain the 25% aggregate reduction in baseline loads. Absent such information, the assertion that a benchmark is not a suitable tool to maintain compliance with the TMDL is baseless.

d) EPA reliance on CTDEEP comments as basis for effluent limitation: In the Fact Sheet EPA states:

> *" …as it was pointed out in comments received from CTDEEP and other commenters, an optimization benchmark cannot provide assurance that the cumulative nitrogen load to the LIS will not exceed the out-of-basin (Massachusetts, New Hampshire and Vermont) point source wasteload allocation established by the LIS Total Maximum Daily Load (TMDL)."*

SWSC critically examined the February 7, 2018 comment letter submitted by CTDEEP to EPA, and can find no technical or regulatory basis that supports the imposition of a total nitrogen limit in the SWSC permit. SWSC objects to EPA imposing an effluent limitation based upon the request of a third party, without a technical or regulatory basis.

However, since EPA has referred to the CTDEEP comments as a basis in the Fact Sheet for this revised permit and the imposition of an effluent limitation, we are providing the following comments on this basis:

I. Contrary to EPA's language in the Fact Sheet, where EPA refers to the CTDEEP claim that there is a wasteload allocation in the TMDL, there is, in fact, no individual wasteload allocation for SWSC WWTP in the LIS TMDL. See our comment under 5,a) above, where this is discussed in detail.

II. CT DEEP's February 7, 2018 letter states: "We would also like to bring to your attention, the Enhanced Implementation Plan (EIP), which allowing the Springfield WWTP to exceed the baseline cap directly violates."

III. The EIP which CTDEEP references, is simply a document that lays out the goals and the intent of the contributing parties as to what actions they will take going forward. The EIP itself, is not a legally binding document and therefore, cannot provide a legal basis for EPA to impose a water quality based effluent limitation for total nitrogen.

IV. The above notwithstanding, when the EIP is critically examined, it becomes apparent that the SWSC is, in fact, through our acceptance of an annual average loading benchmark, proposing a course of action that is consistent with the EIP. EPA's draft revision imposing a TN effluent limitation, is not consistent with the goals and intent of the EIP and, in fact, goes far beyond the intent or requirements of the EIP with no legal basis or technical support.

Part 1.b.i-iii, of the EIP is shown below:

> *b) Consistent with the 2000 TMDL, EPA and the tributary states will implement a tributary state wastewater treatment plant (WWTP) permitting strategy with a goal of essentially capping existing WWTP total nitrogen loads at or near existing levels until agreement is reached on final allocations and how they will be achieved.*
>
> *I. Cap upstream state WWTPs at or near existing total existing nitrogen loads.*
>
> *II. Require optimization studies for upstream state WWTPs.*
>
> *III. Establish nitrogen monitoring requirements.*

Clearly, an annual average load benchmark of 5,429 lbs/day meets the requirement of capping upstream states' loads at or near existing nitrogen loads. Clearly, optimization studies are intended. Clearly nitrogen monitoring, not effluent limitations, are intended.

There is no meaningful interpretation of this language that would support or provide a legal basis for EPA's arbitrary creation of a water quality based effluent limitation for TN.

Further, the EIP goes beyond even simply providing a framework for NPDES permitting in out-of-basin treatment facilities as shown in Part 1.b.i-iii, above. The EIP offers examples of language that has been used in other out-of-basin permits. That language is nothing like what EPA has proposed here for SWSC. It does not include specific numeric limits, and the only reference to a loading goal is phrased in terms of an annual average. The full text of the sample guidance permit language can be seen in footnote 1 of the EIP document. This detailed permit language has three main regulatory components:

(1) optimization studies;

(2) nitrogen monitoring requirements; and

(3) the calculation of an annual average load based on a calendar year (Jan-Dec), not a 12-month rolling average.

Request: SWSC objects to the reliance on DEEP and "other" third party comments, which provide no adequate legal, regulatory or technical basis to include nitrogen effluent limitations in the SWSC Permit.

e) EPA's failure to provide adequate opportunity for public comment

During development of a TMDL, the public is provided an opportunity to comment on the development of individual WLAs, the distribution of the WLAs, the allocation of the WLA versus load allocation (LA), and the environmental and economic impacts of the overall TMDL plan to attain water quality in the impaired waterbody segment.

During development and public notice of the LIS TMDL, the public was presented with a TMDL that provided for the overall attainment (and associated economic impacts) of the water quality

criteria through: (1) assigned WLAs to in-basin dischargers and (2) an aggregate load target reduction from out-of-basin dischargers.

In the SWSC Permit Revision, EPA has effectively assigned an out-of-basin WLA to an individual discharger, and provided public comment in isolation of the overall TMDL attainment plan, in isolation of all other out-of-basin dischargers, and in isolation of all other in-basin WLAs and LAs. By carving out public comment to an isolated WLA developed outside the TMDL process that should more appropriately be applied to a basin-wide strategy EPA has prevented the public from effectively evaluating the overall environmental and economic impacts of this action on the TMDL's overarching strategy to attain water quality goals, and the associated economic impacts.

f) Compliance Schedule: While SWSC strongly opposes the inclusion of an effluent limitation for total nitrogen, in the event EPA adopts a Final Permit that does, in fact, contain an effluent limitation for total nitrogen, SWSC requests that a compliance schedule be included in the permit.

The SRWTF facility is unable to meet the annual average TN loading effluent limitation of 2,534 lbs/day, proposed in this revised permit, without a significant upgrade of its facilities. Please see our detailed comments under 6.d, below, which provides an analysis demonstrating that potentially 80% of the time, the plant effluent exceeds the concentrations necessary during wet periods (produced at 49 mgd, 12-month rolling average flow) to achieve the annual average loading limitation. In order for the SRWTF to achieve consistent compliance with this proposed water quality based effluent limitation, SWSC must undertake a significant upgrade of the SRWTF to an advanced biologic nutrient removal (BNR) process. Such an upgrade would be at considerable expense and significant length of time (without proven environmental benefit).

In accordance with 314 CMR 4.03(b), a NPDES permit may specify a compliance schedule when a permittee: *"…cannot comply with such permit requirements or limitations, or there is insufficient information available to determine whether the permittee can comply with such permit requirements or limitations."*

SWSC requests the following compliance schedule:

EDP+3 years: Permittee shall undertake an engineering analysis and alternatives study of the SRWTF to determine the most cost effective treatment methods available to consistently achieve compliance with the water quality based effluent limitation for total nitrogen contained in this permit. This alternatives analysis shall utilize a statistically defensible data set of current plant performance for TN over a number of months and seasons, and shall recommend treatment methodologies that will provide for compliance over a range of conditions including wet weather events, projected future flows to the facility (up to the permitted flow), and a range of temperature conditions.

EDP+ 6 years: Permittee shall secure all necessary approvals and future funding commitments for the required upgrade project. Permittee shall also complete the design and prepare the Request for Proposal.

EDP+ 7 years: Permittee shall advertise for bids for improvements necessary at the SRWTF to achieve consistent compliance for the total nitrogen effluent limitation.

EDP + 8 years: Permittee shall select the contractor and award the project.

EDP+ 10 years: Permittee shall complete construction and place into operation improvements at the SRWTF, noted above.

EDP+ 11 Years: Permittee shall evaluate performance of the SRWTF improvements and request an extension to the compliance schedule if necessary.

EDP+ 12 years: Based upon the performance evaluation, the Permittee shall achieve compliance with the total nitrogen water quality based effluent limitation.

Request:

For the reasons cited above and elsewhere in these comments, and our previous comments, SWSC requests that EPA remove the nitrogen discharge effluent limitation.

Response 46

EPA has addressed each of the issues and concerns raised in the above comment in the manner in which they appear. Also see the General Response.

(a) There is no individual WLA for Springfield in the LIS TMDL

EPA established the TN effluent limitation based upon its evaluation of effluent data from 2012-2016 and receiving water data indicating that that LIS is exceeding its assimilative capacity for that pollutant and is suffering the continuing effects of cultural eutrophication. This effluent limit, which was determined to be necessary and was imposed pursuant to 40 CFR § 122.44(d), is consistent with the assumptions and the requirements of the TMDL and will further its implementation. Despite substantial reductions and progress to meet the TMDL over the past 30 years, water quality standards are still not being achieved. EPA agrees that the out-of-basin wasteload allocation identified in the LIS TMDL does not provide wasteload allocations for individual point source dischargers. But neither an updated TMDL nor an individual WLA for a discharge is a legal prerequisite for an effluent limit, as discussed in the General Response.

The commenter contends that the nitrogen effluent limitation for the SWSC was established "in isolation of a model that includes the entire study area, in isolation of the reductions required of other out-of-basin WWTPs, and in isolation of the TMDL itself." First, both the Environmental Appeals Board and First Circuit have repeatedly held that development of a model or similar analysis is not required prior to developing a water quality-based effluent limitation.

The commenter also alleges that imposition of the effluent limit on the facility will not ensure consistency with the TMDL. To the contrary, the imposition of enforceable effluent limitations will do more to ensure compliance with the TMDL compared with the path advocated by the commenter — namely, voluntary reductions in TN loading, which could be increased at any time for any reason.

The commenter's suggestion that it is being singled out among the out-of-basin dischargers is not accurate. EPA has imposed new nitrogen effluent limitations on three other out-of-basin POTWs and outlined its overall approach to permitting the remaining POTWs, including Springfield. Prioritizing reissuance of the Springfield POTW permit, which is long expired, makes sense from the standpoint of implementing the Act and achieving water quality standards in LIS, given the size and location of the Springfield facility. It is the largest out-of-basin point source contributor of TN to those waters and is marked by increasing load trends, which will add further TN loading to a water body that has already reached its assimilative capacity for the pollutant, and thus contribute to excursions above applicable water quality standards.

(b) EPA has failed to provide an adequate statement of basis for imposing a TN effluent limitation within the Fact Sheet

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

EPA's description of the TN effluent limitation, including its technical derivation and the reason for converting it into an enforceable limit, was proportional to the importance of the issue involved and the degree of controversy surrounding it. The justification for the TN effluent limit is included in both the November 15, 2017 Fact Sheet, provided for public notice with the initial Draft Permit, and the August 17, 2018 Fact Sheet Supplement provided for public notice with the revised Draft Permit. These two documents provided, together, the basis for the TN effluent limit. The basis for including a requirement that controls the discharge of nitrogen was explained in the 2017 Fact Sheet as it was included as an alternative benchmark in the initial draft permit. The basis for changing the benchmark to an effluent limit was explained in the 2018 Fact Sheet Supplement. EPA made additional reference to the letter from CT DEP, and endorsed the rationale set forth in it as a basis for shifting to the more protective course called for by Section 301 of the Act.

The commenter has focused on the comparative lengths of the fact sheet and fact sheet supplement, but this complaint misses the mark. EPA is under no obligation to repeat background information relevant to the facility, discharge and receiving waters when making a discrete adjustment to a draft permit, and one that draws from a common set of operative facts, which as the commenter points out was set out in extensive detail in the initial fact sheet. Aside from pointing out that the fact sheet and supplement differed in length, the commenter does not identify how its ability to raise issues or arguments was adversely

affected. To the contrary, the commenter was fully apprised of the relevant issues, as evidenced by the voluminous, detailed and cogent comments on the draft.

As discussed in the General Response, the Agencies reviewed comments regarding the total nitrogen effluent limits received from this commenter and others and have revised the effluent limit to incorporate a mass-based annual average limit derived from the facility design flow, rather than based on statistical evaluation of facility performance data.

(c) LIS TMDL Out-of-Basin Target has been Met

The commenter asserts that the TMDL out-of-basin target has been met and there is "no basis for EPA to assume it will not continue to be achieved utilizing the methods that are already in place," but this misapprehends the command of Sections 301 and 402 of the Act. "[A] mere possibility of compliance does not 'ensure' compliance" as required by the statute and regulations. *In re City of Marlborough, Mass. Easterly Wastewater Treatment Plant*, 12 E.A.D. 235, 248-52 (EAB 2005). *See also, In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342 (EAB 2002) (remanding permit where the Region failed to support its conclusion that the permit would "ensure" compliance with water quality standards and questioning whether the Region's statement that the permit is "reasonably capable" of achieving water quality standards comports with prohibition against issuing permits that do not ensure compliance with water quality standards). As is discussed in the General Response, the effluent limit is based on both the need to assure that the out-of-basin target will continue to be met through the imposition of enforceable permit limits rather than voluntary reductions that could be abandoned at any point and the need to prevent further degradation of a water body in a downstream state.

The commenter's refrain that the presumed 25% reduction from out-of-basin dischargers has already been achieved misses the operative point from the standpoint of CWA permitting: even with such a reduction and with other far more significant and costly reductions from CT and NY POTWs, water quality is still impaired for nutrients in LIS. Springfield has not persuasively disputed that its discharges, which are both substantial and proximate to LIS, have the reasonable potential to cause or to contribute to water quality standards violations, which are ongoing. It instead argues that more planning, in the form of revised TMDL, or analysis, by way of a new water quality model, are required before EPA can act. As explained, this is premise is not sound, and the Act nowhere establishes such record-based or regulatory preconditions to development and imposition of necessary WQBELs upon permit reissuance.

(d) CT DEEP "and others" fail to provide a basis for an effluent limitation in accordance with federal regulations

EPA took account of the concerns expressed by the downstream state consistent with the CWA § 401(a)(2) and federal regulations. Section 401(a)(1) of the CWA *forbids* the issuance of a federal license for a discharge to waters of the United States unless the state where the discharge originates, in this case Massachusetts, either certifies that the discharge will comply with, among other things, state water quality standards, or waives certification.

EPA's regulations at 40 CFR § 122.44(d)(3), §124.53 and §124.55 describe the manner in which NPDES permits must conform to conditions contained in state certifications. Section 401(a)(2) of the CWA and 40 CFR § 122.44(d)(4) *require* EPA to condition NPDES permits in a manner that will ensure compliance with the applicable water quality standards of a "downstream affected state," in this case Connecticut. The statute directs EPA to consider the views of the downstream state concerning whether a discharge would affect that state's waters. If EPA agrees that a discharge would affect downstream waters, including causing or contributing to violations of that state's water quality standards, EPA must condition the permit to ensure compliance with the water quality standards. If the downstream affected state believes that the permit fails to include such requirements, then it may appeal the permit (like any other interested person with standing).

In this case, the TN effluent limit has been derived to meet Section 301(b)(1)(C) of the Act, to ensure that the downstream state water quality standards are met and that those waters are not further impaired by increases in TN loading from out-of-basin discharges, and also to be consistent with the assumptions of the 2000 TMDL for downstream Connecticut waters.

EPA did not rely on the EIP as the sole basis for its decision making, but instead grounded its decision in the LIS TMDL, and Sections 301(b)(1)(C), 401 and 402 of the Act and implementing regulations. EPA fully concurs that the EIP is not legally binding, but EPA has elsewhere described its decision to afford the EIP framework some weight, in light of the fact that it reflects the consensus views of all five states that discharge to and contribute impairments to the five LIS states. EPA's interpretation of the EIP is consistent with the plain text of that document ("Consistent with the 2000 TMDL, EPA and the tributary states will implement a tributary state wastewater treatment plant (WWTP) permitting strategy with a goal of essentially capping existing WWTP total nitrogen loads at or near existing levels until agreement is reached on final allocations and how they will be achieved."; "Cap upstream state WWTPs at or near existing total existing nitrogen loads."). It, additionally, accords with the views of the states, as evidenced by CT's comments and MA's certification of the permit, along with the issuance of an identical state permit. At bottom, the EIP evidences concern over the contribution of out-of-basin dischargers and the need for EPA and other CWA regulatory to introduce "enhanced" controls on TN loading, because of severe, ongoing nitrogen-driven impairments in LIS. In addressing that concern, and based on comments on the draft permit, EPA reasonably opted for a protective approach comprised of enforceable limits.

EPA also did not establish the TN effluent limit only because CTDEEP requested it, but because CTDEEP, and others, presented legal arguments and technical analyses that had not previously been considered. Specifically, these commenters argued that:

> A nitrogen "benchmark" provides no legal assurance that the Springfield Regional Wastewater Treatment Plant will optimize its nitrogen removal efforts. The term "benchmark" is neither defined nor used in the CWA, the nitrogen TMDL for LIS, or in EPA's nitrogen reduction strategy. A nitrogen "benchmark" is unenforceable, and is unacceptable. (Denise Ruzicka, CTDEEP in comments presented at the public hearing on April 24, 2018)

And:

> The benchmarks in the draft permit and the other two alternatives are not acceptable. A benchmark is not an enforceable limit, and, without a numerical limit, enforcement is impossible and there are no consequences for noncompliance. (Comments Submitted by the Connecticut Fund for the Environment, Inc., and its Bi-state Programs Save the Sound and the Long Island Soundkeeper, by Letter Dated February 7, 2018)

EPA considered this characterization and agreed that the benchmarks do not have the weight to ensure that loads are "essentially capped" as required by the Enhanced Implementation Plan ("EIP"), and discussed in the General Response, section II.

In addition, EPA considered the scientific papers published after the completion of the TMDL and cited by the commenters (discussed further in the section III of the General Response) that cast doubt on the 1998 estimates made of the out-of-basin baseline point source loading from which a 25% reduction in nitrogen was assumed in the TMDL. These later estimates suggest that the baseline loading may actually have been significantly lower than assumed in the TMDL which, in turn, casts doubt on claims of out-of-basin point source load reductions achieved so far. While that uncertainty can never be removed as there is very little out-of-basin point source nitrogen effluent data from 1998, it does suggest another reason why it would be unreasonable to allow out-of-basin point loading to *increase* over time, as would be more likely in the absence of enforceable limits.

EPA evaluated the concerns raised and agreed that under Section 301 and 401(a) an effluent limit is needed to provide assurance that the out-of-basin load will not increase over time as flows from the out-of-basin dischargers increase and cause further impairment or exceed the out-of-basin allocation.

(e) EPA's failure to provide an adequate opportunity for public comment.

EPA disagrees. There was ample opportunity for public comment, well above and beyond the minimum 30 days required by NPDES regulations at 40 CFR § 124.10(b). The public comment period for the revised Draft Permit ran from August 17, 2018 through October 15, 2018 for a total of 60 days, twice the minimum requirement.

As discussed in detail in the General Response, this permit is consistent with the assumptions and requirements of the TMDL, and implements other permitting requirements of the CWA, and does not change the TMDL in any way.

EPA rejects the assertion that the development of an out-of-basin permitting allocation has deprived the public of an opportunity to comment on the environmental and economic ramifications of the permit as it relates to the TMDL. The comment erroneously presumes that EPA, by issuing a permit consistent with the assumptions and requirements of the TMDL and to ensure compliance with water quality standards of affected states, is revising

the TMDL. This is not an action under Section 303 of the Act, but rather 301 and 402 that is designed to ensure consistency with the TMDL, and to assure compliance with Section 301, including applicable water quality standards. In any event, the length of time afforded the public to comment in this case exceeds the regulatory minimum for TMDL comment.

(f) Compliance Schedule

See Response 47.

Comment 47

Page 4 of 25, Part I.A.1. Nitrogen Discharge Limitation: The draft revised permit included an average annual TN mass loading of 2,534 lbs/day as a discharge limitation. SWSC can find no reasonable basis in EPA's factsheet to support the selection of 2,534 lbs/day as an effluent mass loading limitation. The period of data used to select this value does not reflect typical influent flow conditions that occurred at SRWTF in the past. SWSC strongly objects to EPA's proposed use of faulty estimates of the existing load as a source for developing the new target that is completely without technical or regulatory justification. Such a flawed approach would unfairly regulate those facilities, like SRWTF, that have already upgraded and exceeded required load reductions; it would not be justified to expect the same percent reduction from an upgraded plant as from a plant that had not upgraded. It is arbitrary and capricious to force an effluent limitation, or somehow interpret or extrapolate requirements set forth for SRWTF, in a manner creating significant, binding, regulatory consequences that would unfairly burden SWSC's ratepayers.

Request: SWSC requests that EPA incorporate an optimization benchmark load into the final NPDES permit at Part I.H.1.a as follows. "*The Permittee shall continue to operate the treatment facility such that compliance with ammonia, BOD and TSS limits is maintained, while at the same time optimize nitrogen removal process to achieve a 12-month rolling average benchmark concentration of 8 mg/l total nitrogen*." The technical and regulatory bases for this request are provided below.

Basis for Comment

The TMDL target for out-of-basin wasteloads for the Connecticut River is 16,254 lbs/day of TN, which is 25% lower than the TMDL baseline load of 21,672 lbs/day TN. Note that the TMDL baseline was based on loading conditions in 1990, when SRWTF was a conventional activated sludge plant (extended aeration process) with no biological nutrient removal capability and discharged an effluent with total nitrogen around 19.6 mg/L[46]. There is no technical or regulatory basis to require that SWSC maintain its existing mass loading level, or its mass loading level during some arbitrary period. The TMDL target for out-of-basin wasteloads for the Connecticut River is 25% lower than the TMDL baseline load in 1990.

In anticipation of the TMDL, SWSC upgraded its treatment plant in 1995 to incorporate nitrogen removal. As a result, SWSC consistently discharges TN concentrations less than 10 mg/L, which

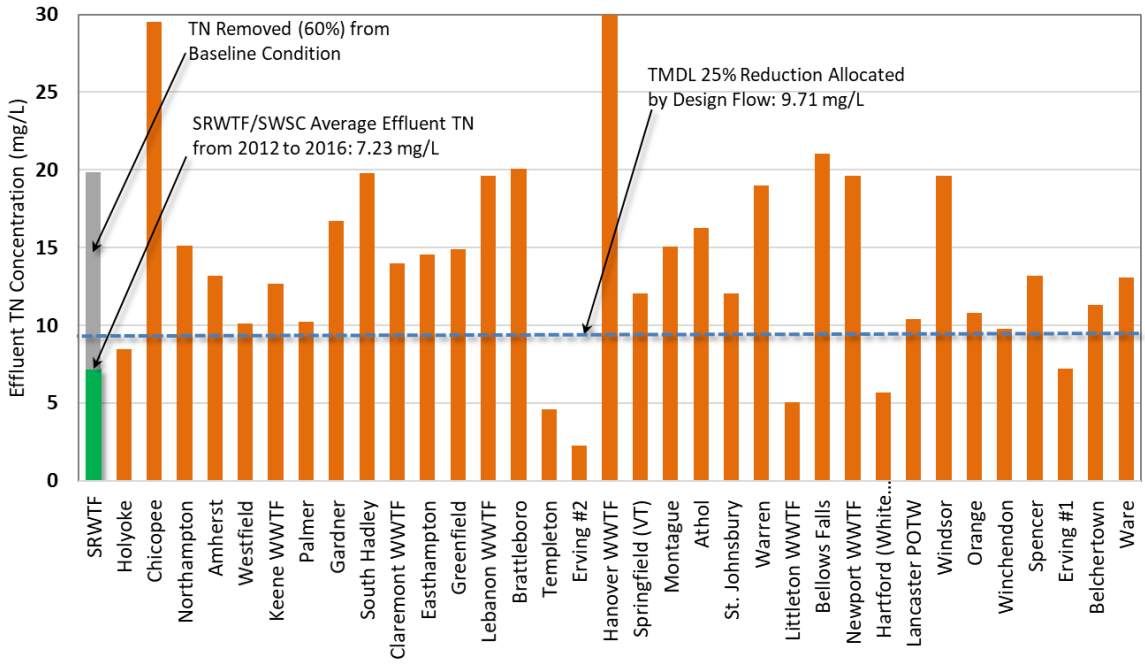
[46] EPA's estimate of non-BNR plant based on an average of discharge concentrations from conventional activated sludge plants in Massachusetts.

represents a decrease of approximately 50% compared to the TMDL baseline conditions (1990). Prior to 1995, SRWTF was a conventional activated sludge plant with very limited biological nitrogen removal capacity. SRWTF currently discharges approximately 37 to 50 MGD; flow is highly dependent on precipitation conditions. However, SRWTF *is authorized to discharge up to its* design flow of 67 MGD. As its discharge flow increases, nitrogen load can be expected to increase proportionately. However, even at its maximum design flow, SRWTF will be discharging considerably less TN load than its share of allowable load.

5,429 lbs/day is the TMDL-based TN Allocation for SRWTF

As we commented in our February 15, 2018 letter on the previous draft permit dated November 15, 2017, SWSC has been unfairly targeted with TN requirements without any legal or scientific basis. SWSC has exceeded the TN mass loading reduction requirement interpreted from the 2000 LIS TMDL. Based on the design flows of the out-of-basin dischargers in the Connecticut River basin, the calculated TMDL allocation for SRWTF would be 5,429 lbs/day, which is SRWTF's share of the allowable wasteload of 16,254 lbs/day, based on its share of the total design flow (67 MGD out of 201 MGD).

The figure below shows the effluent TN concentrations of major out-of-basin dischargers to the Connecticut River basin, in order of design flow, in comparison to the allowable annual average TN concentration of 9.71 mg/L at design flow capacity. SRWTF is one of only a few dischargers with effluent TN concentration that will satisfy the allowable TMDL load at its design capacity.



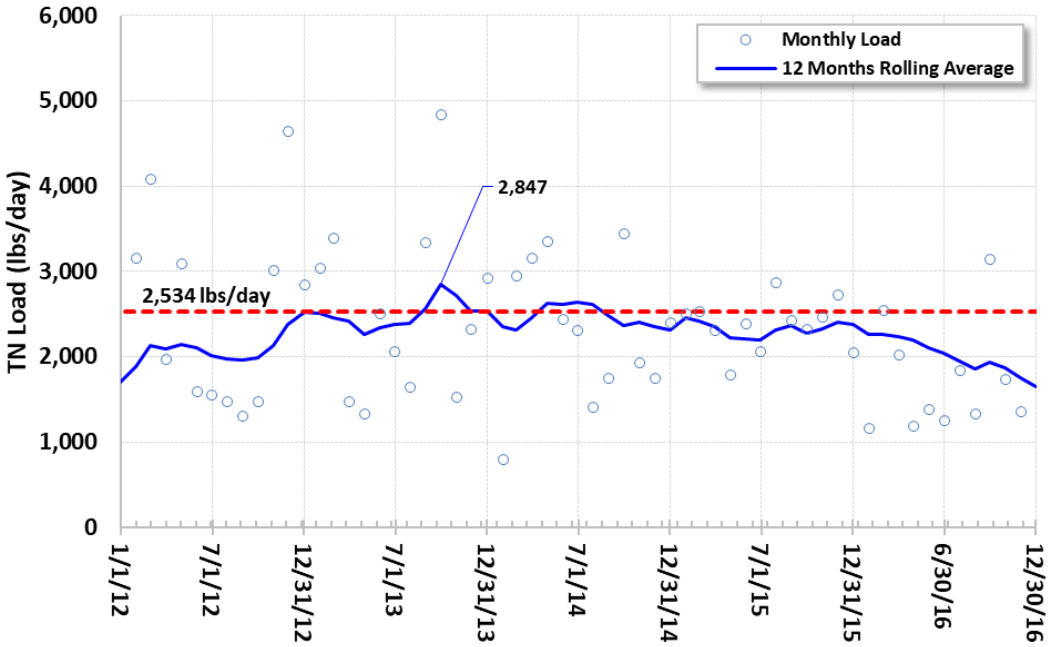
Average Annual Effluent TN Concentrations from Out-of-Basin POTWs Tributary to the Connecticut River with Design Flows Greater than 1.0 MGD.[47]

[47] Factsheet, Attachment G, Out of Basin Point Source Loadings, Draft NPDES Permit No. MA0101613, February. 2018.

2,534 lbs/day Does Not Reflect Current Loading Condition

The total nitrogen mass loading rate of 2,534 lbs/year is the maximum of the calendar year averages (Jan. - Dec.), between 2012 and 2016. However, the permit requires SWSC to report a 12-month rolling average ("the arithmetic mean of the monthly average total nitrogen for the reporting month and the monthly average total nitrogen of the previous eleven months."). EPA's inconsistency in calculating permit effluent limitations and reporting requirements on TN loads results in the permit becoming more stringent than intended, as the maximum of a 12-month rolling average is typically greater than the average of calendar year.

Using the DMR data EPA included in Appendix A of the Modification Fact Sheet Supplement, the figure below plots the reported monthly TN loads from 2012 to 2016. The 12-month rolling average is shown as the blue line and 2,534 lbs/d limit is shown as red dashed line. During the 2012-2016 period, there are 8 months when the 12-month rolling averages are greater than 2,534 lbs/d. If a permit effluent limitation of 2,534 lbs/d had been given in 2012, then SWSC would have been in non-compliance with the permit limit 13% of the time during the 5-year permit period.



Analysis of TN Optimization Benchmark

As stated in our previous comments to the 2017 draft permit, SWSC considers a benchmark concentration of 8 mg/L TN reasonable as an annual average optimization benchmark for the following reasons:

It is a widely acceptable practice in the wastewater treatment field that performance of process technologies is typically evaluated by effluent concentration (as opposed to effluent load) of the

targeted compounds, e.g. BOD, TSS, NH3-N. Effluent TN concentration must therefore be the basis of any benchmark for performance evaluation/optimization.

Based on the performance data available in the literature, it is not reasonable to expect a Ludzack-Ettinger (LE) process (currently SRWTF operates under such biological process mode) to consistently achieve an effluent concentration of lower than 8 mg/L TN because of the physical limitations imposed by its configuration. Therefore, if an optimization target of 8 mg/L TN effluent concentration is established, plants utilizing the LE process will likely require optimization to adjust operation parameters or potential modifications to operate in different process configurations.

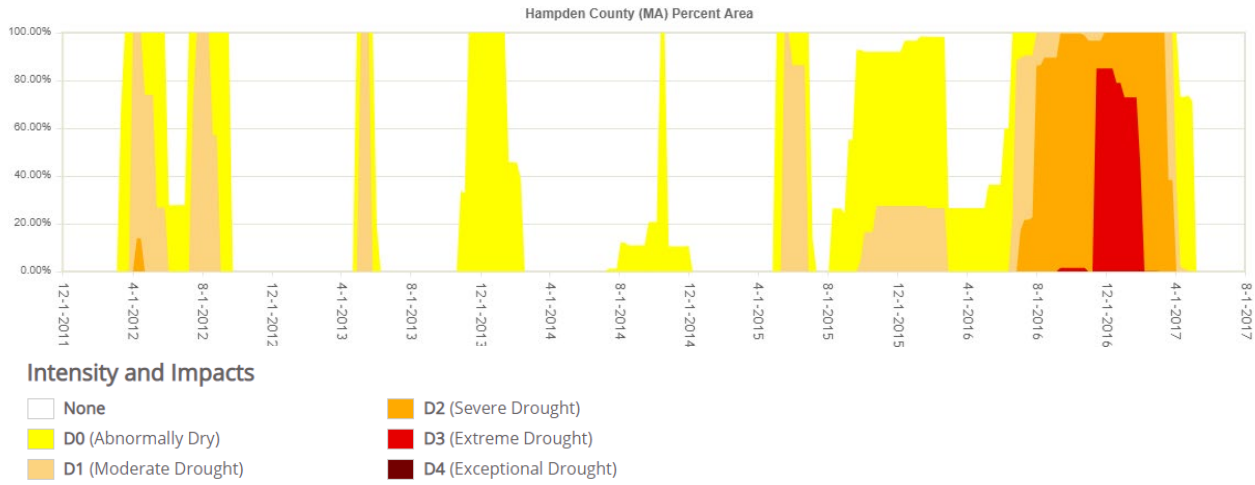
Meeting the 8 mg/L TN benchmark would ensure that SRWTF will not have any potential to exceed the TMDL threshold concentration of 9.71 mg/L associated with its allowable TMDL load.

However, if EPA believes that it needs to include a loading-based optimization benchmark, then that benchmark structure should include the following aspects:
Allow additive loads from anticipated future growth, as described in comment #8 below.

Allow SWSC to add the existing loads allocated to other POTWs that would be conveyed to SRWTF for treatment upon completion of regionalization of wastewater treatment services, as described in comment #9 blow.

The optimization benchmark of 2,954 lbs/day is computed using the 12 month rolling average effluent TN concentration from 2012-2016 and 95-percentile of 12 month rolling average of influent flow from 2000-2016.

SWSC has been proactively optimizing operations at SRWTF to improve treatment performance to reduce TN loads to the Connecticut River. The 2012-2016 period was a very dry period (see draught map below), as a result, the 96 percentile of 12-month rolling average flow is 40 MGD (as shown in the figure on page 16) during this period. However, considering influent flow data over a longer period (2000-2016), the 95-percentile flow is approximately 49 MGD.

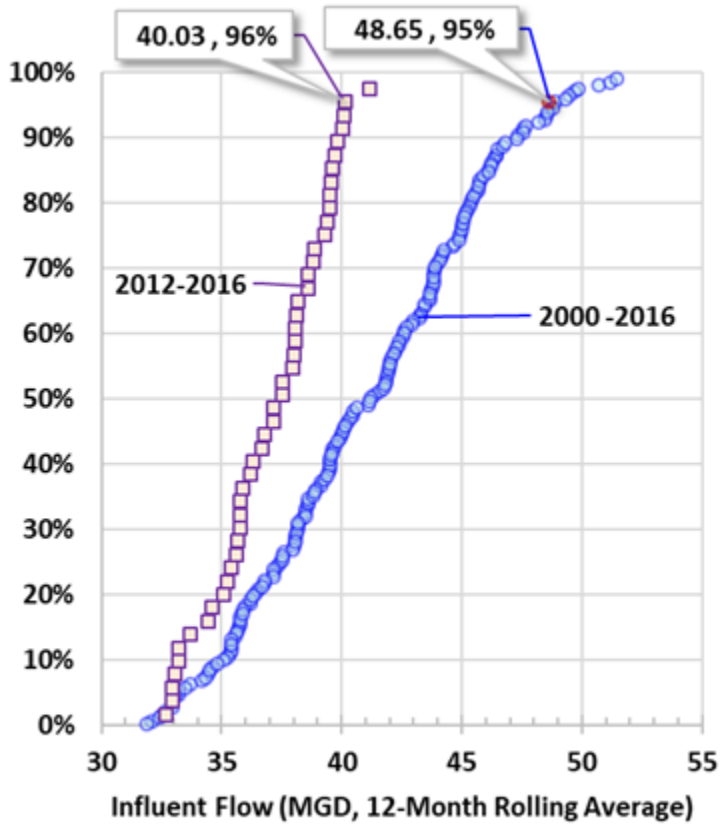


Draught Intensity during 2012-2016 Period for Hampden County, MA. Reference: National Integrated Drought Information System: https://www.drought.gov/drought/search/data

In the context of maintaining the current TN load condition from SRWTF, and a 25% TMDL out-of-basin reduction requirement, it is reasonable to use the 95 percentile of the recorded influent flow (49 MGD), since the last permit (2000 to 2016) and the median TN 12-month rolling average concentration (7.23 mg/L) of the most recent years (2012-2016) to calculate the optimization benchmark.

Therefore, the optimization target should be 49 MGD x 7.23 mg/L x 8.34 = 2,954 lbs/d.

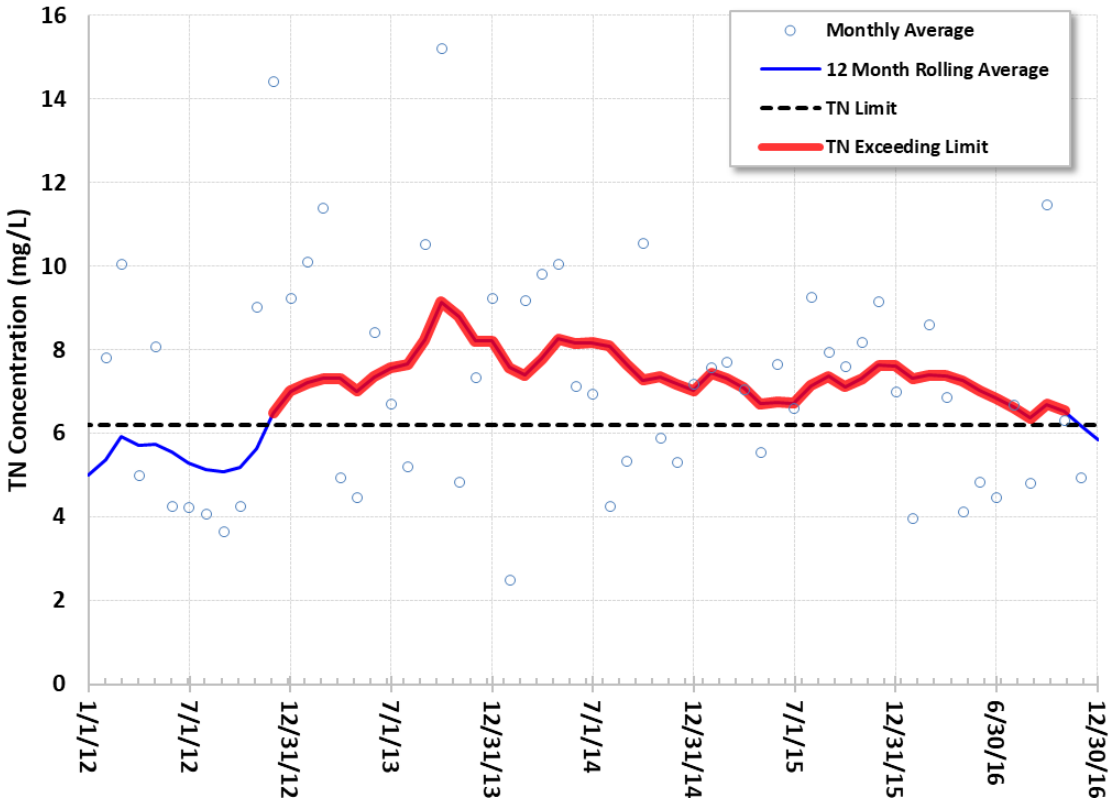
This goal would meet the TMDL target of a 25% reduction in TN loadings from baseline loadings, since the estimated load to the Connecticut River from out-of-basin point sources would be 15,192 lbs/day based on EPA's 2006 analysis of out-of-basin point sources to the CT River Watershed (see 2017 Fact Sheet Table 3 and Attachments G and H). This is less than the TMDL target of 16,254 lbs/day, allowing for additional non-POTW point source loadings as well as any possible new point source discharges.



Cumulative Distribution of 12 Month Rolling Average of SRWTF Influent Flows.

Why 2,534 lbs/day as a Discharge Limit will Require SRWTF to Upgrade

Since 2,534 lbs/d is an annual average load based on a 12-month rolling average of both effluent flow and TN concentration, the TN concentration limit is actually 6.2 mg/L for wet weather periods when the 12 month rolling average flow is around 49 MGD. Plotting the 12-month rolling average TN concentration data (Figure below) indicates that **there are 48 months (80% of the time during 2012-2016) when the TN concentrations (12-month rolling average) are greater than 6.2 mg/L.** This means there is an 80% chance that SRWTF will violate its permit if any of these months was in a wet period when 12 month rolling average influent flows were 49 MGD or higher. To comply with this perceived permit limit, the only option for SWSC is to upgrade the SRWTF to an advanced biologic nutrient removal (BNR) process which could potentially require a large sum of capital budget, with undue financial burden to the rate payers while achieving minimal or no environmental benefit. This type of financial impact would also affect other Commission initiatives, such as the CSO LTCP program and infrastructure renewal program.



Cumulative Distribution of 12 Month Rolling Average of SRWTF Influent Flows.

<u>Failure of EPA to provide an allowance for TN attenuation in the Connecticut River:</u>
In proposing optimization requirements for SWSC (in the Revised Draft Permit, through an effluent limitation), EPA has made no allowance for attenuation. However, the Agency has done so with regard to other permits. In particular, the Northfield Mount Hermon School wastewater treatment facility. This facility discharges to the Connecticut River, and is regulated under NPDES Permit No. MA0032573. In the Draft Permit Fact Sheet, pages 16-17 of 41, EPA states:

"The Northfield Mount Hermon WWTF discharges to the Connecticut River, which drains to the Long Island Sound…Due to the relatively small contribution of the discharge and its relatively distant location from Long Island Sound, EPA estimates that the nitrogen discharged from the facility is attenuated within the Connecticut River and its tributaries and is not contributing to the dissolved oxygen impairment in the Long Island Sound…In order to ensure that the out-of-basin total nitrogen wasteload allocation prescribed in the Long Island Sound TMDL continues to be met, the draft permit includes average monthly reporting requirements for total nitrogen…"

Attenuation is one of the many factors evaluated during TMDL development and is critical to the establishment of appropriate WLAs. Inasmuch as SWSC asserts that individual WLAs for out-of-basin dischargers, such as the Northfield Mount Hermon WWTF, have not been established in the TMDL, and that attenuation for out-of-basin dischargers was not evaluated as part of the TMDL document, yet EPA provides that attenuation may be accounted for in the determination of a need for a water quality based effluent limit, SWSC requests that EPA provide an allowance for attenuation to the SRWTF.

Absent EPAs ability to provide a study demonstrating that no attenuation of total nitrogen occurs between the discharge from SRWTF and the Long Island Sound, SWSC requests that an allowance for attenuation be provided. SWSC would be willing to provide a technical evaluation determining the attenuation of TN, if requested by EPA, and included as part of an evaluation of TN impacts on the LIS from SRWTF, and the subsequent basis for regulatory control (if any) of TN from SWSC.

Request: SWSC strongly objects to the imposition of a total nitrogen effluent limitation. Were EPA to insist on a nitrogen effluent limit, the only substantiated approach would be to base it directly on the LIS TMDL, which would be 5,429 lbs/day, or 9.71 mg/l. The SWSC's preference is to have this load or concentration expressed as an optimization goal. For the reasons included above, included elsewhere in this comment letter, and included in previous comment letters, SWSC asserts that EPA has not provided a regulatory, environmental, scientific or economic basis to establish such a limitation. SWSC requests EPA modify the Revised Draft to reflect an optimization goal for nitrogen:

If EPA prefers a daily concentration optimization goal, then a TN optimization goal of 8 mg/L would be most appropriate.

If EPA instead prefers a loading goal on a 12-month rolling average basis, then that goal should be 2,954 lbs/day.

Response 47

See General Response and Response 46.

Nitrogen attenuation refers to the loss of nitrogen that occurs during tributary river transport between the point of discharge and the point of impact. Attenuation is predicated on the idea that some degree of nitrogen removal due to permanent uptake or denitrification occurs in the river. A permit issuer does not have an obligation to impose higher effluent limits based on attenuation (or dilution). *In re City of Attleboro Wastewater Treatment Plant*, 14 E.A.D. 398, 423-428 (EAB 2009). Whether to account for those factors is committed to EPA's discretion. A 2008 study, discussed in the General Response, section III, demonstrated that there is little or no attenuation of nitrogen in the Connecticut River. EPA relied on outdated assumptions used prior to this study in developing the Northfield Mt. Hermon permit. EPA expects that nitrogen requirements in Northfield Mount Hermon's next permit reissuance will be consistent with the watershed wide approach described in the General Response. Since Northfield Mount Hermon's design flow, at 0.45 MGD is less than 1 MGD, the permit will include a requirement to optimize facility operation to minimize the discharge of nitrogen, but no nitrogen effluent limit.

EPA is not convinced by the arguments presented in the comment that the facility cannot meet the new effluent limit using its existing facility. First of all, the effluent limit in the Final Permit (2,794 lb/day) is higher than the effluent limit analyzed by the commenter (2,534 lb/day) because, in responding to comments EPA revised its approach and based the final permit effluent limit on a performance based concentration (5 mg/L) at design flow,

rather than the highest annual loading of recent years. See the General Response for a discussion of the final permit limit derivation.

Moreover, EPA disagrees with the assumptions made in the analyses used to demonstrate non-compliance. The effluent limit is a loading based annual average and does not rely on the facility meeting a certain concentration year-round. Rather, it can be reasonably assumed that effluent concentrations will vary depending on season (temperature) and flow. The limit is an average of the most recent 12 monthly average nitrogen loads, not a calculation based on a rolling average annual flow and a rolling annual average concentration.

However, if SWSC cannot meet the new nitrogen effluent limit by optimizing the operation of its existing processes, a compliance schedule, implemented through an administrative order, may be developed to allow the time necessary to make any necessary facility upgrades. The Permittee may contact EPA Region 1's Enforcement and Compliance Assistance Division for more information.

Comment 48

Page 6 of 25, Part I.A.1. Footnote 9, Incremental Increase in Total Nitrogen Mass Loading Limit: SWSC agrees with EPA to allow an incremental increase of total nitrogen mass loading allocation due to combined sewer overflow (CSO) reduction, as a result of the Commission's Long-Term Control Plan (LTCP) implementation effort.

Request: SWSC supports retaining the provision on increases due to CSO reductions, but suggest that its location in the permit be moved. SWSC requests to move the following from Part I.A.1. Footnote *9 to Part I.H.1.a.Special Condition section: "*Upon the completion and documentation of each currently planned combined sewer overflow project, the permittee may request an incremental increase in the total nitrogen mass loading limit. The maximum allowable net increase for each project is listed in Attachment E. The request must be made in writing to EPA and MassDEP and shall include certification by a licensed civil engineer that the project has been completed as described in the Springfield Water and Sewer Commission's ("SWSC") 2014 Integrated Wastewater Plan (which incorporates the Long Term Control Plan) and is fully operational. Any variations in the project from that described in the SWSC's 2014 Integrated Wastewater Plan shall be identified and described in sufficient detail for EPA to determine the effect on the total nitrogen mass loading limit."*

Response 48

The TN loading in the Final Permit includes all the CSO reductions planned since the effluent limit has been revised to a level greater than the effluent limit combined with the 4 project-specific load increases proposed in the revised Draft Permit. As the entire design flow was used in the derivation of the effluent limit, it includes any CSO discharges directed to the WWTF, consistent with the allocations planned for other out-of-basin CSO dischargers that divert CSO flow to their WWTF. Therefore, the Final Permit does not allow for additional increases in the TN load discharged from the facility upon completion of CSO reduction projects, as provided in Attachment E to the revised Draft Permit.

Comment 49

Page 12 of 25, Part I.H.1. Nitrogen Special Condition – Incremental Increase for Future Growth: The loading optimization target is based on existing populations of the member communities, and does not account for ongoing future population and economic growth in the area. The SRWTF's design flow is 67 million gallons per day, which includes additional capacity for future population and economic growth. Currently, the permitted average annual flow capacity is 67 MGD, and EPA has calculated the discharge mass loading limit for BOD and TSS based on a concentration limit and design flow of 67 MGD (i.e. average monthly BOD discharge mass limit: 67 MGD x 30 mg/L x 8.34 = 16,763 lbs/day). However, EPA has proposed total nitrogen mass loading values that are all calculated based on existing average daily flow conditions without factoring in future population and economic growth.

Request: SWSC requests an allowance for incremental increases of total nitrogen loads from additional sanitary sewer flow increases due to population and economic growth within the service area of SRWTF. The Commission requests EPA to consider adding the following to Part I.H.1.a.:

"*The permittee may request an incremental increase of Total Nitrogen load resulting from additional flows due to population and economic growth within the SRWTF service area. The request must be made in writing to EPA and MassDEP and shall include a report demonstrating the increase is due to population and economic growth.*"

Response 49

As discussed in the General Response, the approach to deriving TN effluent limits for out-of-basin dischargers to LIS has been revised and is now based on the total design flow. As the Facility currently discharges at a level well below their design flow, growth is already taken into account.

EPA acknowledges that if the influent flow and/or incoming TN loading increases substantially in the future, due to population or industrial growth, it may be necessary to enhance the treatment system to achieve lower TN concentrations in order to continue to meet the total load limit of 2,794 lb/day. EPA observes that this is a longer-term planning consideration, and whether the Facility will actually reach or approach design flow is unknown. The Agencies recommend that Springfield incorporate this fact into their future planning.

Comment 50

Page 12 of 25, Part I.H.1. Nitrogen Special Condition – Additive Loads from Consolidation of Other POTWs: EPA acknowledges that SWSC is currently exploring the possibility of consolidating wastewater flows from other facilities throughout the Springfield area, and diverting them for treatment at the SRWTF. Affording the SWSC the opportunity to explore this possibility could achieve significantly greater reductions in nitrogen loadings to the Connecticut River. Notably, other facilities in the Springfield area do not have the capacity or technology to achieve advanced

nitrogen removal that the SRWTF is designed for and currently achieves. In that regard, any diverted flows will receive a much higher level of nitrogen removal at the SRWTF than they currently receive at surrounding facilities. The overall reduction in nitrogen loadings from the closure of less technologically-advanced facilities in the Springfield area, would far outweigh any incremental increase of TN loads to the larger and more technologically-advanced SRWTF. Allowing additional TN loads allocated to the consolidated facilities to be transferred to SRWFT will better incentivize SRWTF to explore these possibilities, which would result in considerable overall load reductions within the watershed. This approach is consistent with the objectives of the TMDL, as there would not be a net increase in the TN load being discharged to the Connecticut River.

Request: SWSC requests the addition of TN loads resulting from consolidation of other POTWs in Springfield area. The Commission requests EPA to consider adding the followings to Part I.H.1.a.:

"*Should a facility divert some or all of its flow to the SRWTF the TN mass loading optimization benchmark that was allocated to that facility shall be added to Springfield's TN optimization benchmark of 2,954 lbs/day.*"

Response 50

Should a facility divert some, or all, of its flow to the SRWTF for treatment, the Permittee may submit a request to EPA requesting a permit modification, in which case EPA will evaluate all relevant information available at the time the request is made (i.e., consideration of facility data, etc.) and make a determination based on this evaluation. This will leave the Permittee in the same position as under their proposed structure, but will allow EPA to make record-based permit adjustments in light of flow diversions that have actually materialized. Under the current approach to nitrogen loading limits used to develop this and other recent Massachusetts permits in the Connecticut River watershed is to manage the aggregate loading to the Long Island Sound, EPA finds that it would reasonable to reallocate a loading derived for one POTW to another if the responsibility for treating the wastewater were also to be moved and the overall result were that combined nitrogen loading from the receiving facility were equal to or less than the combined allocation.

Comment 51

ATTACHMENT E Allowable TN Load Increase: EPA included a table summarizing Allowable Incremental TN Load Increase Per Project. However, the incremental increase was based on CSO reductions described in the 2014 Integrated Wastewater Plan, which was based on a typical year precipitation condition and a median TN concentration based on a nationwide survey. These values are not representative of the actual CSO loading conditions for SWSC's sewer system, especially when annual rainfall volume, event intensity, and duration are far greater than the selected "typical" year of 1976.

Request: SWSC requests EPA to revise the table based on 2011 precipitation conditions and an average TN concentration of 9.5 mg/L. The table should be revised as shown below:

Project	Allowable Incremental TN Load Increase Per Project (lbs/day)
Phase I - Washburn CSO Control	17.4
Phase I.5 - CSO 012/013/018 Modifications	0.0
Phase 2 - York Street Pump Station and River Crossing	72.3
Phase 3 - Locust Transfer Structure/Conduit and Flow Optimization in Mill System	1.9
Future CSO Abatement Projects	TBD*

* To be determined based on CSO volume reductions as a result of the future CSO Abatement projects under 2011 model year condition and average TN concentration of 9.5 mg/L.

The technical and regulatory basis for this request is provided below in comments on Table 1 of Fact Sheet Supplement, 3. Total Nitrogen.

Response 51

EPA based the projected values in Attachment E to the revised Draft Permit on information that was included in the 2014 Integrated Wastewater Plan (IWP), which incorporates the LTCP, that was submitted to EPA by the SWSC. As stated in the above comment, the 2014 IWP and the LTCP includes information relative to expected reductions in CSOs as various projects are completed based on a typical year precipitation condition, which was selected by the SWSC to be 1976. EPA was unaware of concerns regarding the suitability of using 1976 the typical precipitation year. This year is cited extensively throughout the IWP, LTCP and in the annual CSO reports that are submitted by the SWSC, including the report for calendar year 2018 which was submitted in March 2019.

EPA expects permittees to account for a variety of factors, including representative conditions, when selecting models and information that will be used to drive decisions relating to the selection and implementation of projects aimed at reducing and elimination CSO discharges. Further, this information is also used by the regulatory agencies in evaluating the appropriateness of the selected levels of CSO controls and for compliance purposes. Should the Permittee have reason to believe that a selected model, or other information, that served as the basis for the selection of specific CSO controls is flawed, they should notify EPA and MassDEP and work expeditiously towards submitting a revised LTCP and IWP for review, as the application of a different "typical year" may result in assumptions that differ than those established in the LTCP.

However, as discussed in Response 48, the provision to allow incremental increases in the effluent limit has been removed from the Final Permit.

Comment 52

Page 4 of 5, 2018 Fact Sheet Supplement, 3. Total Nitrogen, Table 1 Projected Connecticut River Interceptor (CRI) Annual CSO Volume Reductions and Allowable Incremental TN Load Increases Following Completion of Planned CSO Mitigation Projects: Table 1 listed all the data sources used to calculate the Allowable Incremental TN Load Increase Per Project table, in permit Attachment E. However, these values are not representative of the actual CSO loading conditions for SWSC's sewer system when annual rainfall volume, event intensity and duration are far greater than the selected model year of 1976. In addition, the table is incorrect for calculating Phase 2 and Phase 3 projects.

Request: SWSC requests EPA to revise the table based on 2011 precipitation conditions and an average TN concentration of 9.5 mg/L. Table 1 should be revised as shown below:

Project	Baseline Condition (CRI Total) (MG/Year)[1]	Estimated Annual CSO Volume Following Project Completion (MG/year)[2]	Estimated CSO Volume Reduction From Baseline Conditions Following Project Completion (MG/Year)[3]	Allowable Incremental TN Load Increase (Lbs/Year)[4,5]	Allowable Incremental TN Load Increase (average Lbs/day)[5,6]
Phase I - Washburn CSO Control	861	781	80	6,333	17.4
Phase I.5 - CSO 012/013/018 Modifications	861	781	0	0	0.0
Phase 2 - York Street Pump Station and River Crossing	861	448	333	26,396	72.3
Phase 3 - Locust Transfer Structure/Conduit and Flow Optimization in Mill System	861	439	9	682	1.9
Total Load Increase				**33,411**	**91.5**

[1]Baseline Condition (model year 2011 – Connecticut River Interceptor (CRI) Totals)
[2]Estimated Annual CSO Volume Following Project Completion based on model scenario runs under 2011 precipitation conditions.
[3]Estimated CSO Volume Reductions From Baseline Conditions Following Project Completion = (Baseline Condition CSO Volume Following Project Completion (MG/Year)
[4]Allowable Incremental TN Load Increase (lbs/day) = [Estimated CSO Reduction From Baseline Conditions Following Project Completion (MG/Year) * Assumed TN Concentration in combined sewage (5 mg/l) * 8.34]
[5]Estimated TN Concentration in Combined Sewage – based on review of typical TN concentration in CSO of similar systems.
[6]Allowable Incremental TN Load Increase (lbs/day) = [(Allowable Incremental TN Load Increase (lbs/year)) * (1 year/365 days)]

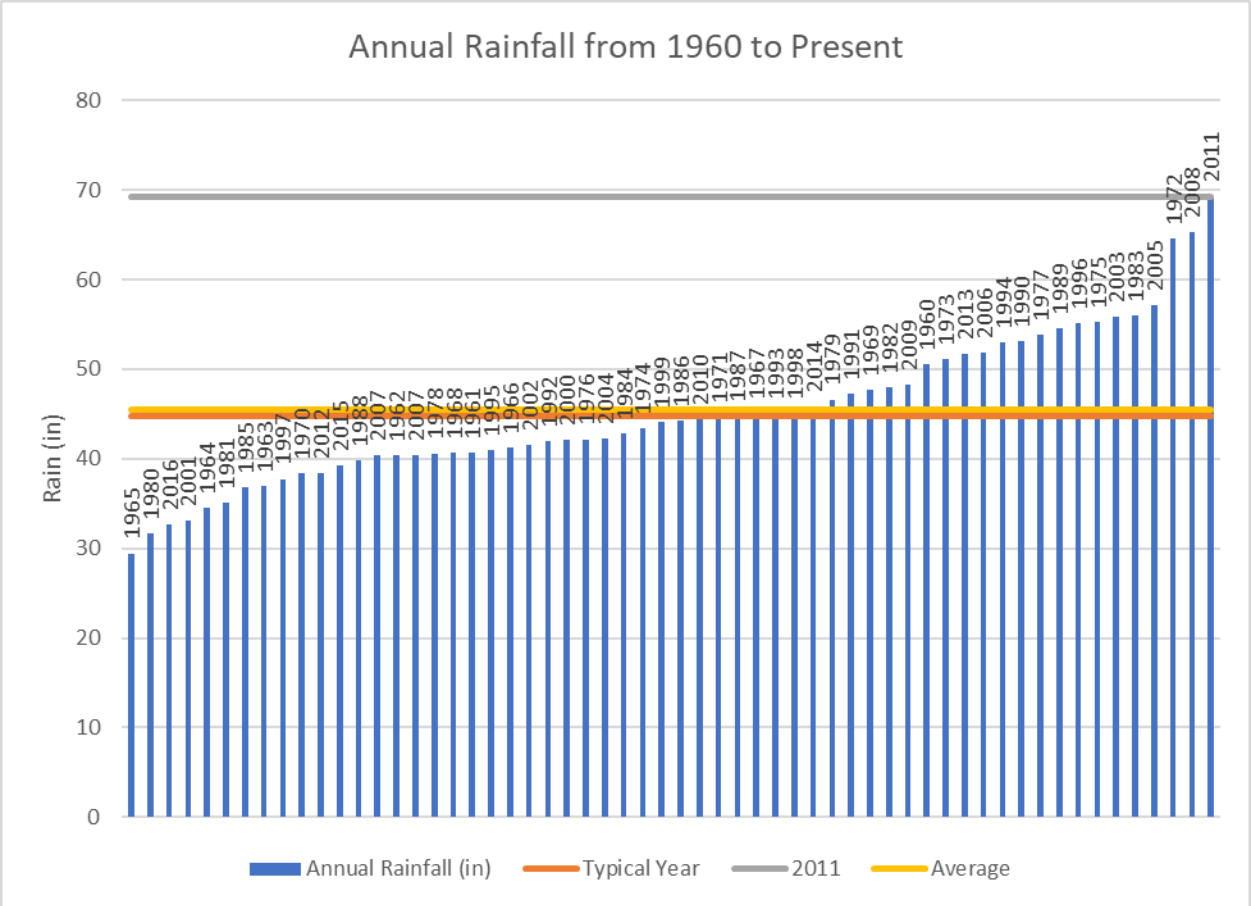
The technical and regulatory bases for this request is described below:

Total Nitrogen Concentration in CSO is Typically 9 -10 mg/L

Total nitrogen concentrations in CSO discharges are specific to the sewer system and characteristics of the sewer service area. Concentrations are also highly dependent on climate conditions and storm event conditions with respect to when the samples were taken. It is for this reason the 2004 report to Congress EPA cited in the permit has a wide range of TKN with the highest concentration up to 87 mg/L. SWSC conducted a literature review of TKN/TN concentration in CSO discharges from communities in the northeast region and found typical concentrations in the 9-10 mg/L range. Therefore, an average of 9.5 mg/L is used for calculations of incremental increases in mass loading. A review memorandum is attached to this comment letter to support this analysis.

Combined Sewer Overflow Volume Reduction Shall be Calculated using a More Recent Model Year Precipitation Conditions

Historical rainfall totals between 1960 and 2017 are presented in the Figure below. The typical year and average total rainfalls are identified in orange and yellow, respectively. The year 2011 was identified as the wettest on record with almost 70 inches of rainfall, as compared to a total rainfall of approximately 46 inches in an average year.



Permit conditions need to take into consideration the range of conditions that may be present, and should be based on the maximum conditions a permittee can meet. Therefore, the 2011 annual precipitation, representing maximum conditions, should be used as model year basis for CSO

reductions. That is, in any given year, the possibility of exceeding the selected conditions are within a low expectation of probability.

The SWSC InfoWorks CS model was simulated with 2011 precipitation conditions. Under baseline conditions, the annual CSO volume is 861 million gallons.

The Commission has recently completed Phase I of the LTCP and Phase 2, the York Street Pump Station and River Crossing, are in the 90% design phase. The Commission's IWP outlined the annual CSO reduction by phase, as presented in the Table below. This table outlines the cumulative percentage of CSO reduction by volume (MG) between Phase 1 (9%) through the 3rd phase of the plan at 49%.

Using these phased CSO reduction percentage estimates, along with the total annual CSO volumes simulated by the SWSC InfoWorks CS model, the cumulative CSO volume reductions during the 2011 model year are summarized in table below.

Project	Date	Phase	LTCO CSO Reduction	
			CSO Volume Reduction By Project (%)	Cumulative CSO Volume Reduction (%)
Phases 1-1.5	2012-2016	1	8%	9%
Phase 2: York Street Pump Station and River Crossing	2015-2020	2	41%	48%
Phase 3: Locust Transfer Structure/Conduit and Flow Optimization in Mill System	2020-2022	3	1%	49%

Response 52

See Response 51.

COMMENTS SUBMITTED BY THE TOWNS OF AGAWAM, EAST LONGMEADOW, WEST SPRINGFIELD AND WILBRAHAM (THE "CO-PERMITTEES")

IX. Comments submitted by Christopher J. Golba, Superintendent, Department of Public Works, Town of Agawam, Massachusetts, by letter dated February 9, 2018

Comment 53

The Springfield Water and Sewer Commission ("SWSC") has prepared extensive comments regarding the Draft National Pollutant Discharge Elimination System ("NPDES") permit ("Permit") dated November 15, 2017, for the Springfield Regional Wastewater Treatment Facility ("SRWTF") (see attached). The Draft NPDES Permit (MA0101613) would supersede the current SRWTF NPDES Permit MA0101613 and would also incorporate regulation of the 23 CSOs located in the

City of Springfield (currently regulated under NPDES Permit MA0103331). In addition to the named permittee (SWSC), the Draft Permit is also issued to six Co-Permittees, including the Town of Agawam, all of which contribute wastewater to the SRWTF.

We would like to express our concurrence with the comments on the draft permit prepared by SWSC, in particular those comments that are relevant to regulation of the co-permittees. In addition, we request that compliance with Parts C, D and E be extended to 36 months following the effective date of the permit ("EDP"). Our Town did not apply to be regulated under this permit, does not own or operate a wastewater treatment facility, and has never before been regulated by a NPDES wastewater permit. The Draft Permit requirements represent a new, significant burden for our Town, and we would need to collaborate with the other co-permittees to perform many of the requirements together in order to minimize costs and ensure consistency. The schedule proposed in the Draft Permit dictates compliance milestones that are unrealistic for us given these considerations.

We urge EPA to withdraw this Draft Permit and revise the Permit to incorporate the comments prepared by SWSC, as well as extending compliance for co-permittees to 36 months following the EDP.

Response 53

EPA has considered the comment. Please see Response 1.

With respect to the commenter's request that compliance with Parts C, D, and E be extended to 36 months, the deadline for complying with these requirements remains unchanged in the Final Permit, as the commenter has not identified any specific impediments to meeting this requirement within the time frame established in the permit. Any relevant work and information relative to operation and maintenance of the collection system (i.e., mapping, staffing information, ongoing operation and maintenance programs, etc.) that has already been conducted by the Permittee and co-permittees may be used to develop the Collection System Operation and Maintenance Plan (O&M) and to satisfy the requirements in Part I.D. of the permit. The requirement to develop and implement a plan to control I/I to the sewer system is consistent with a similar requirement in Massachusetts regulations at 314 CMR 12.04(2), so all co-permittees likely, by now, already have an appropriate plan, or one that can be adapted to meet the permit requirement here. To the extent any of the co-permittees still encounter difficulties in meeting the permit deadlines, they are encouraged to contact EPA's Enforcement and Compliance Assurance Division to discuss compliance assistance.

X. Comments submitted by Bruce Fenney, Superintendent, Public Works, Town of East Longmeadow, by letter dated February 9, 2018

Comment 54

The Springfield Water and Sewer Commission (SWSC) has prepared extensive comments regarding the Draft National Pollutant Discharge Elimination System (NPDES) permit (Permit) dated November 15, 2017, for the Springfield Regional Wastewater Treatment Facility (SRWTF). The

DRAFT NPDES Permit (MA0101613) would supersede the current SRWTF NPDES Permit MA0101613 and would also incorporate regulation of the 23 CSOs located in the City of Springfield (currently regulated under NPDES Permit MA0103331). In addition to the named permittee (SWSC), the Draft Permit is also issued to six Co-Permittees, including the Town of East Longmeadow, all of which contribute wastewater to the SRWTF.

Listed below please find comments relating to the Draft Permit submitted on behalf of Town of East Longmeadow. We wish to empathize the importance of our comments that are relevant to regulation of the co-permittees, in particular those that request compliance with Part C, D and E of the Draft Permit. The Town of East Longmeadow did not apply to be regulated under this Permit, does not own or operate a wastewater treatment facility, and has never before been regulated by an NPDES wastewater permit. The Draft Permit requirements represent a new, significant burden for our Town, and we will need to collaborate with the other co-permittees to perform many of the requirements together in order to minimize costs and ensure consistency. The proposed schedule in the Draft Permit dictates compliance milestones that are unrealistic for us given these considerations.

We urge EPA to withdraw this Draft Permit and revise the Permit to incorporate the comments prepared by SWSC, as well as extending compliance for co-permittees to 36 months following the effective date of the permit.

- <u>Inconsistency in Co-Permittee Requirements:</u> The draft permit page 1 of 24 states:

  "…are co-permittees for Part C, Unauthorized Discharges; Part D, Operation and Maintenance…and Part E, Alternate Power."

  However, the Fact Sheet page 5 of 34, Part I, paragraph three states:

  "These municipalities are co-permittees for certain activities pertaining to proper operation and maintenance of their respective collection systems (see Part I.C. and I.D of the draft permit."

- <u>Part C, of the Draft Permit Unauthorized Discharges</u>

  1. The draft NPDES permit is issued to the SWSC, but also to the six towns identified above. While none of these towns own or operate a CSO (all CSOs are located in the City of Springfield), their collection systems contribute to a combined system, and all wastewater from the six municipalities eventually flows to the SRWTF for treatment and discharge (or overflows at a CSO in Springfield).

  2. On page 13 of 24, Part C, the draft permit states:
     "The permittee and co-permittees are authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Part I.A.1 and Part I.B.1 of this permit."

While the above language is common to NPDES permits across the country, of concern in this permit is the inability to clearly identify liability with a single permit issued to seven entities (SWSC and six co-permittees).

For example, it is our understanding that discharge location 042 has historically been treated as an emergency bypass, and we will request that it continue to be treated so. However, if the U.S. Environmental Protection Agency (EPA) fails to grant an affirmative defense for its use, SWSC may be subject to fines and penalties, yet the cause of the unpermitted discharge is excessive flows [perhaps due to illegal cross-connections, failure to implement inflow and infiltration (I/I) control, etc.] from any one or more of the six co-permittees.

- Part D, of the Draft Permit Operation & Maintenance of Sewer System.

    1. Maintenance Staff:
       The Town of East Longmeadow currently has no staff to carry out any of the maintenance, repairs, and testing obligations in this section.

    2. Preventative Maintenance Program:
       The Department of Public Works currently has a comprehensive preventative maintenance plan for all of our stations, but will have to expand this practice based on the new draft NPDES Permit. This will also require additional staffing not currently funded.

    3. Infiltration/Inflow:
       We currently have an aggressive I&I program funded through our sewer enterprise fund. The Town of East Longmeadow will have to increase sewer rates to offset all the additional information required under the new permit.

    4. Collection System Mapping:
       The 30 month timeline is unrealistic and would like to extend, at a minimum to 48 months.

    5. Collection System Operations & Maintenance Plan:
       The six month goal for implementation of the aforementioned plan is unrealistic and needs to be extended.

- Part D, of the Draft Permit Alternative Power Source.

    1. Careful consideration needs to be taken under this section of the draft permit along with more defined terms and understanding of this new regulation. We have many satellite pump stations along with four large pump stations. To provide an alternative source of power is a considerable expense and the Town of East Longmeadow is not prepared for these increased operational costs.

- Liability:

1. The draft permit page 1 of 24 states*: "The permittee and each co-permittee are severally liable under Part C, Part D and Part E for their own activities and required reporting with respect to the portions of the collection system that they own and operate. They are not liable for violations of Part C, Part D and Part E committed by others relative to the portions of the collection system owned and operated by others. Nor are they responsible for any reporting that is required of other permittees under Part C, Part D and Part E."*

The issue of liability for violations of the permit when such a permit is issued to multiple entities is a concern. For example, Part C prohibits unauthorized discharges; however, given a situation where wastewater from Town A flows through Town B, and a sewer line blockage in downstream Town B causes surcharging in the sewer system with an ultimate unauthorized discharge in the upstream collection system of Town A, who is liable under the co-permittee arrangement? A second example would be if the SRWTF experiences an unauthorized bypass due to excessive flows. Which of the six named co-permittees would be held responsible for causing or contributing to that discharge? What if CSO discharges increase at a particular location over time? Would the permittee, a co-permittee, or combination of co-permittees be responsible?

EPA must consider removing the co-permittees from this permit and seeking other means to regulate the upstream towns. If that is not possible, EPA must clarify if the co-permittees are responsible for Part C, Part D and Part E, or are only responsible for Parts C and D; critically examine language regarding liability and modify it to limit SWSC's liability for non-compliance with the permit related to co-permittees; and clarify the liability of co-permittees for hydraulically connected systems. After careful review of the Draft NPDES Permit and all its new extremely prescriptive regulations and legal requirements, I have many concerns of its adaptability for the Town of East Longmeadow. There are many new operational, financial and legal responsibilities that need extensive review to implement everything within the new permit.

Response 54

EPA notes that the Draft Permit is correct in identifying the parts of the permit that apply to the co-permittees as Part I.C (Unauthorized discharges), Part I.D. (Proper Operation and Maintenance), and Part E. (Alternate Power Source). Part I.E. was inadvertently excluded from the description of the permit conditions that apply to the co-permittees that was included in the Fact Sheet. This correction is noted herein for the record.

With respect to the commenter's concurrence with the SWSC comments regarding regulation of co-permittees, including issues concerning liability, and request that EPA revise the permit consistent with SWSC's comments, EPA refers the commenter to Response 1. Liability would only attach to a co-permittee if they fail to comply with permit requirements pertaining to the collection system within their specific jurisdiction owned or operated by them and, in the scenarios described by the commenter above, in the event that failure caused or contributed to the unauthorized discharge.

With respect to the commenter's concerns over maintaining adequate staffing levels for carrying out a preventative maintenance program, these requirements are consistent with those already required of the Permittee to conform with State regulations at 314 CMR 12.03

(Operations of Treatment Works and Sewer Systems) and 314 CMR 12.04 (Maintenance of Treatment Works and Sewer Systems). Similarly, the requirements in Parts I.C.D.E. are consistent with the those already required of the Permittee to conform with State regulations set forth at 314 CMR 12.0 (Operation, Maintenance and Pretreatment Standards for Wastewater Treatment Works. Therefore, the schedule for complying with the requirements in the Draft Permit remains unchanged in the Final Permit. Any work that the Permittee and co-permittees have conducted in accordance with 314 CMR 12.0 may be used to satisfy the requirements of Parts I.C.D. and E. See Response 15 and Response 53.

EPA acknowledges and supports that the Permittee is already engaged in preventative maintenance of the sewer system and activities to reduce I/I. EPA agrees that current and on-going work related to the requirements in the Part I.D. may be included in the O&M Plan. Indeed, the Town's current and ongoing activities may satisfy the Permit requirements if they address each of the elements listed in Part I.D.2-3. EPA evaluates compliance based on the conditions set forth in the Final Permit.

To the extent any of the co-permittees still encounter difficulties in meeting the permit deadlines or other requirements, such as the requirement to have alternative power, they are encouraged to contact EPA's Enforcement and Compliance Assurance Division to discuss compliance assistance.

XI. Comments submitted by Robert J. Colson, Director of Public Works, City of West Springfield, Massachusetts, by letter dated February 12, 2018

Comment 55

The Springfield Water and Sewer Commission ("SWSC") has prepared extensive comments regarding the Draft National Pollutant Discharge Elimination System ("NPDES") permit ("Permit") dated November 15, 2017, for the Springfield Regional Wastewater Treatment Facility ("SRWTF"). The Draft NPDES Permit (MA0101613) would supersede the current SRWTF NPDES Permit MA0101613 and would also incorporate regulation of the 23 CSOs located in the City of Springfield (currently regulated under NPDES Permit MA0103331). In addition to the named Permittee (SWSC), the Draft Permit is also issued to six Co-Permittees, including the City of West Springfield, all of which contribute wastewater to the SRWTF.

Enclosed please find comments relating to the Draft Permit submitted from the SWSC. We wish to empathize the importance of these comments we support that are relevant to regulation of the co-permittees, in particular those that request compliance with Part C, D and E of the Draft Permit. Our City did not apply to be regulated under this Permit, does not own or operate a wastewater treatment facility, and has never before been regulated by a NPDES wastewater permit. The Draft Permit requirements represent a new, significant burden for our City, and we will need to collaborate with the other co-permittees to perform many of the requirements together in order to minimize costs and ensure consistency. The proposed schedule in the Draft Permit dictates compliance milestones that are unrealistic for us given these considerations.

We urge EPA to withdraw this Draft Permit and revise the Permit to incorporate the comments prepared by SWSC, as well as extending compliance for co-permittees to 36 months following the effective date of the permit.

Response 55

With respect to the commenter's concurrence with the SWSC comments regarding inclusion of co-permittees in the permit, EPA refers the commenter to Response 1.

With respect to the commenter's request that compliance with Parts C, D, and E be extended to 36 months, echoing the comment made by SWSC, the schedule for complying with the requirements in the Draft Permit remains unchanged in the Final Permit. See Response 15 and Response 53.

To the extent any of the co-permittees still encounter difficulties in meeting the permit deadlines, they are encouraged to contact EPA's Enforcement and Compliance Assurance Division to discuss compliance assistance.

XII. Comments submitted by Edwin W. Miga Jr., P.E., Director, Department of Public Works, Town of Wilbraham, Massachusetts, by letter dated February 8, 2018

Comment 56

Our Town did not apply to be regulated under this permit nor does it operate a wastewater treatment facility. The Draft Permit requirements represent a new, significant burden for our Town. It has always been our understanding that regionalization approach to wastewater treatment was preferred over individual treatment systems. When Wilbraham had a Waste Water Treatment Plant it discovered that it was not financially feasible to provide the extensive treatment necessary to discharge to the river. From a financial and environmental perspective, we acknowledged and embraced the regionalization approach and joined the Springfield system. Springfield holds the permit and is the responsible party for meeting requirements of the permit.

Wilbraham being labeled a co-permittee does not change this responsibility. By contract with the SWSC we are accountable for our actions. Wilbraham is meeting all financial obligations for all improvements made in their system to accommodate Wilbraham flow. Additionally, the SRWTF regulates our wastewater and we are obligated to comply. As an example, SRWTF oversees an Industrial Pre-Treatment Program in Wilbraham as well as meters and analysis of our flows. We are also regulated by the MassDEP. By example Mass 314 CMR 12.0 requires us to conduct an I&I study to be submitted to DEP in December.

We urge EPA to withdraw this Draft Permit, revise the Permit to incorporate the comments prepared by SWSC, and remove the Town of Wilbraham as a co-permittee from the final permit.

Response 56

EPA has considered the comment and refers the commenter to Response 1. The Town's sewer system and appurtenances fall within the definition of treatment works under the Act, and it is responsible for a set of limited activities within its jurisdictional boundaries.

To the extent any of the co-permittees still encounter difficulties in meeting the permit deadlines, they are encouraged to contact EPA's Enforcement and Compliance Assurance Division to discuss compliance assistance.

COMMENTS SUBMITTED BY CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION ("CTDEEP")

XIII. Comments Submitted by Denise Ruzicka, P.E., Director, Water Planning and Management Division, Bureau of Land Protection and Water Reuse, CTDEEP, by Letter Dated February 7, 2018

Comment 57

Nitrogen

In response to hypoxic conditions in LIS, Connecticut and New York jointly developed a Total Maximum Daily Load ("TMDL") for nitrogen which was approved by the Federal Environmental Protection Agency ("EPA") in April 2001. Please update the permit fact sheet to more accurately reflect this information relative to the LIS TMDL.

In addition to a number of nitrogen reduction efforts required of Connecticut and New York, the TMDL specifies a % reduction in the estimated baseline nitrogen load from states upstream of Connecticut (MA, NH, and VT). Because the baseline load was determined using an average discharge concentration (15 mg/l) and design flows (monitoring data was not available at that time), the baseline load was grossly overestimated. As a result, Massachusetts met the 25% reduction in 2005, however, little if any actual nitrogen removal efforts were implemented. EPA does not allow such "credits" regarding nitrogen load reductions to LIS where Connecticut and New York are concerned.

Upon review of the draft Permit, CTDEEP concludes that the proposed three options for total nitrogen optimization benchmarks are inadequate to address nitrogen loadings to LIS. All three proposed options only establish a benchmark and fail to require an actual permit limit. In addition, the proposed benchmark for option 1 exceeds the baseline cap of 1, 648 pounds/day by 631 pounds/day. Although EPA makes note of this in the fact sheet, EPA fails to explain how allowing an exceedance from the baseline cap, established using 2004-2005 data is acceptable. How can EPA justify allowing a greater discharge of nitrogen than the Springfield WWTP is capable of obtaining?

We would also like to bring to your attention, the Enhanced Implementation Plan ("(EIP") which allowing the Springfield WWTP to exceed the baseline cap directly violates. In 2011, the five watershed states (CT, NY, MA, NH, VT) and EPA agreed upon an EIP. The plan requires EPA and

the tributary states to implement a tributary state wastewater treatment plant ("WWTP") permitting strategy with a goal of essentially capping existing WWTP total nitrogen loads at or near existing levels until agreement is reached on final allocations and how they will be achieved.

Finally, the draft permit requires the WWTP to optimize in order to achieve the greatest performance of nitrogen removal. However, the permittee has demonstrated greater nitrogen removal capabilities and as such, the WWTP is already poised to comply with this condition. In essence, the WWTP will be permitted to discharge more nitrogen than it is capable of removing upon issuance of this draft permit.

A study of nitrogen loading trends to LIS from New England states found that approximately 50% of the nitrogen load to LIS comes from areas north of Connecticut (Mullaney and Schwarz, 2013). This study was based on 10 years (1999-2009) of data and compared computed nitrogen loads from four gaging stations located along the Connecticut-Massachusetts border to the total nitrogen load computed from gages (and estimates) within Connecticut. As Connecticut continues to achieve greater nitrogen reductions at its WWTPs, the load from Massachusetts and other upstream states (New Hampshire and Vermont) consequently becomes a greater portion of the load and warrants full attention. In addition, very little nitrogen attenuation occurs in the Connecticut River (Smith et al. 2008) so this entire total nitrogen load from upper basin states is essentially transported directly to LIS.

We would also like to take this opportunity to call attention to EPA's effort to advance a nitrogen reduction strategy for LIS (see December 23, 2015 letter from the EPA Regional Administrator). You may already be aware of this effort as EPA recently accepted technical comments from stakeholders for Subtasks F & G (Application of Technical Approach for Establishing Nitrogen Thresholds and Allowable Loads for Three LIS Watershed Groupings: Embayments, Large Riverine Systems, and Western LIS). As noted in CTDEEP's comment letter "We continue to support moving all three watershed groupings forward simultaneously and anticipate that any further work with these initial thresholds will include all three watershed groupings".

We feel this permit is an important step to advance the implementation of strategic nitrogen reductions throughout the LIS watershed and to demonstrate EPA's commitment to lead through example. The inclusion of a "benchmark" in a National Pollutant Discharge Elimination System ("NPDES") permit following the collection of 16 years of data is inadequate. CTDEEP notes that EPA took 12 years to issue a draft discharge permit for the Springfield WWTF. The permittee has demonstrated the ability to meet a certain nitrogen discharge. Therefore, it is appropriate for EPA to require a hard nitrogen load **limit** of no more than 1,648 pounds/day in Section I.A.1 of Springfield's NPDES permit. We formally request that the final permit include an enforceable nitrogen permit limit in Section I.A.1.

Response 57

As noted in the above comment, the Fact Sheet did not credit the State of New York as having contributed to the development of the Total Maximum Daily Load ("TMDL") for addressing nitrogen-driven eutrophication impacts in Long Island Sound along with the State of Connecticut. See *Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* (CT DEP and NYSDEC 2000).

Although Fact Sheets are not modified following the public comment period, this clarification is noted herein and is part of the administrative record.

EPA and DEP withdrew all three of the proposals for nitrogen controls included in the 2017 Draft Permit and replaced them with a new proposal in the revised 2018 Draft Permit for the reasons stated in the Fact Sheet Supplement issued with revised Draft Permit.

With respect to the remaining concerns raised in the above comment, see the General Response at the beginning of this Response to Comments, which provides a comprehensive explanation of the overall approach EPA has adopted to address TN effluent limitations for out-of-basin POTWs discharging to Long Island Sound, and encompasses the concerns raised in the comment.

Comment 58

Combined Sewer Overflows

We note that in regard to Combined Sewer Overflows (CSOs), EPA merged the formerly separate NPDES permits for the WWTP and CSOs. We understand that an Administrative Order (EPA AO 14-007) to reduce CSOs was executed in September 2014. We also note that the Integrated Wastewater Plan (IWP) submitted in April 2014, which updates the May 2012 Final CSO Long Term Control Plan, has not been approved by EPA.

One of the conditions for CSOs is that the Nine Minimum Controls be implemented, which includes maximizing combined flows to the WWTP. However, the April 2014 IWP does not adequately address how combined flows will be maximized to the WWTP in order to reduce CSO discharge volume. How much additional combined flow will the upgrade of the York Street Pump Station and Connecticut River Crossing pipes convey to the WWTP? How much will the annual CSO discharge volume be reduced as a result of these efforts?

Response 58

As pointed out in the above comment, Nine Minimum Control #4 requires the maximization of flow to the POTW. The information available to EPA regarding how this control will be implemented and achieved is that which was included in the 2014 IWP, which incorporates the 2012 Final Long Term Control Plan. Based on a review of this information, the completion of the Phase 2 CSO projects (which includes the upgrade of the York Street Pump Station and the Connecticut River Crossing pipes) is expected to result in a reduction of annual CSO discharge flows by 224.3 million gallons per year.

Comment 59

Co-Permittees

Additionally, EPA is adding six co-permittees to the draft permit. The Towns of Agawam, Longmeadow, East Longmeadow, Ludlow, West Springfield and Wilbraham, Massachusetts own and operate sanitary wastewater collection systems that discharge flows to the Springfield Regional

WWTP for treatment. Chicopee was not added to the permit because less than 1,000 residents in the Town of Chicopee are served by sewers discharging to the system. These municipalities are co-permittees for certain activities pertaining to proper operation and maintenance of their respective collection systems. How will EPA and Springfield ensure that these towns will properly maintain their systems? Are these towns conducting any projects to reduce infiltration and/or inflow? How will EPA through the permit achieve reductions in wet weather flows and CSO discharges?

Response 59

The sewer system operation and maintenance requirements in Parts I.C, D and E of the permit require specific activities related to collection system maintenance as well as annual reporting documenting collection system maintenance activities completed for the previous year. These activities include the control of infiltration and inflow (I/I) which will reduce wet weather flows to the treatment facility. The requirement to develop and implement a plan to control I/I to the sewer system is consistent with a similar requirement in Massachusetts regulations at 314 CMR 12.04(2), so all co-permittees likely, by now, already have an appropriate plan, or one that can be adapted to meet the permit requirement here.

With regards to Chicopee: sewer system operation and maintenance provisions are already included in the permit for that city's Water Pollution Control Facility (permit number MA0101508) and apply to the whole collection system, regardless of the wastewater treatment plant to which the sewage is directed,

Comment 60

Public Hearing

CTDEEP supports the Connecticut Fund for the Environment's request (see CFE comment letter dated February 7, 2018) for a public hearing.

Response 60

EPA acknowledges the commenter's support for a public hearing. As noted in the introduction to this Response to Comments, a public hearing was held on April 24, 2018.

XIV. Testimony Provided by Denise Ruzicka, P.E., Director, Water Planning and Management Division, Bureau of Land Protection and Water Reuse, April 24, 2018

Comment 61

Thank you for the opportunity to comment in person on the draft permit being issued to the Springfield Water & Sewer Commission (SWSC) for the Springfield Regional Wastewater Treatment Plant and combined sewer overflows in the City of Springfield, Permit No. MA0101613. My name is Denise Ruzicka, I am the Director of the Water Planning and Management Division, within the Water Protection and Land Reuse Bureau of the Connecticut Department of Energy and

Environmental Protection (CTDEEP). I am submitting testimony on behalf of CTDEEP Commissioner Robert J. Klee.

Long Island Sound is considered a regional resource. The Long Island Sound (LIS) drainage basin includes the Connecticut River watershed in Massachusetts. The Connecticut River, which is Connecticut's namesake, is the longest and largest interstate river in New England. Discharges from the Springfield Regional Wastewater Treatment Plant discharge into the Connecticut River and promptly flow into waters of the State of Connecticut. These discharges have a direct bearing on the water quality and health of the river as it flows through Connecticut and to Long Island Sound. It is for those reasons and the need to protect Connecticut's important resources and our citizens that we are here today.

We have two major concerns, the first is that there is no enforceable nitrogen limit in the Springfield draft permit. The 2001 EPA-approved Total Maximum Daily Load (TMDL) analysis identified the importance of managing nitrogen loads to remedy hypoxia in LIS. Given the critical relationship between nitrogen loading and hypoxia in LIS, we are asking EPA to add a twelve month rolling average nitrogen load limit of 1,648 pounds per day into the table on Page 4 in Part I.A.1 of the draft permit, as we requested in our written comments dated February 7, 2018. This limit is something that the Springfield Regional Wastewater Treatment Plant has previously demonstrated it can readily achieve without additional capital investment.

Our second concern is the slow pace and inadequate on-the-ground actions regarding the reduction of combined sewer overflows (CSOs) in Springfield that discharge into the Connecticut River. As you are aware, most of Springfield still has one pipe that collects both stormwater and sewage. When it rains, these single pipes become overfilled, releasing a combination of stormwater and untreated raw sewage directly into the Connecticut River and two of its tributaries, the Chicopee and Mill Rivers. Current efforts are focusing only on the CSOs that go directly to the Connecticut River, but the eleven (11) CSOs that continue to discharge to the Chicopee and Mill Rivers (and ultimately end up in the Connecticut River) will not be further addressed.

These discharges of combined stormwater and sewage are a cause of bacteria impairments to the Connecticut River at the state line, contributing to water quality problems in Connecticut that raise concerns in the citizens' use of the river. These CSOs also add an unaccounted load of additional nitrogen to the Connecticut River that travels to LIS, worsening the hypoxia problem there even further.

Bacteria from CSOs are causing and contributing to water quality problems in the Connecticut River. CTDEEP requests that EPA require SWSC to complete more testing in the Connecticut River downstream at the Massachusetts/Connecticut state border, by adding a permit condition.
In addition, we are requesting that EPA require that SWSC address the CWA goal of eliminating CSOs. We encourage EPA to use all means, including but not limited to enforcement actions, to assure that SWSC achieves steady and meaningful progress in reducing CSO discharges. SWSC's current pace of CSO reduction is unacceptable and not in keeping with similar communities in Connecticut and elsewhere.

Further details in support of our two major concerns are provided within the following written testimony.

Detailed comments

Nitrogen

In our submittal of written comments (dated February 7, 2018), CTDEEP raised the concern that there is no nitrogen limit in the Springfield draft permit. The 2001 EPA-approved TMDL analysis identified the importance of managing nitrogen loads to remedy hypoxia in LIS.
On the top of Page 18 of the Permit Fact Sheet, EPA clearly states that: "It has been determined that excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including low dissolved oxygen." However, more recent plans and reports do not appear to have been considered in the preparation of this draft permit. This includes EPA supported efforts, such as the *Long Island Sound Nitrogen Reduction Strategy*, (EPA Region 1 and Region 2, December 2015); and the *Watershed Synthesis Section: A Preliminary and Qualitative Evaluation of the Adequacy of Current Stormwater and Nonpoint Source Nitrogen Control Efforts in Achieving the 2000 Long Island Sound Total Maximum Daily Load for Dissolved Oxygen*, (New England Interstate Water Pollution Control Commission, August 2014). Both have concluded that nitrogen discharges from wastewater treatment plants, as well as nitrogen from CSOs, continue to contribute to water quality violations in LIS. In addition, a study of nitrogen loading trends to LIS from New England states found that approximately 50% of the nitrogen load to LIS comes from areas north of Connecticut (Mullaney and Schwarz, 2013). Very little to no attenuation occurs in the Connecticut River (Smith et al., 2008) so this entire total nitrogen load from upper basin states is essentially transported directly to LIS.

Given the critical relationship between nitrogen loading and hypoxia in LIS, we are asking EPA to add a twelve month rolling average nitrogen load limit of 1,648 pounds per day into the table on Page 4 in Part I.A.1 of the draft permit, as we requested in our February 7, 2018 comment letter. This limit is something that the Springfield Regional Wastewater Treatment Plant has previously demonstrated it can readily achieve without additional capital investment. The draft permit requests more nitrogen monitoring (even though monitoring has occurred for the past 14 years) and establishes no permitted nitrogen limits, but instead offers a nebulous "benchmark" approach. A nitrogen "benchmark" provides no legal assurance that the Springfield Regional Wastewater Treatment Plant will optimize its nitrogen removal efforts. The term "benchmark" is neither defined nor used in the CWA, the nitrogen TMDL for LIS, or in EPA's nitrogen reduction strategy. A nitrogen "benchmark" is unenforceable, and is unacceptable.

Furthermore, the inclusion of only a "benchmark" in the permit would allow the Springfield Regional Wastewater Treatment Plant to lessen its efforts relative to nitrogen removal. In fact, recent data suggests that this is already occurring. The Permit Fact Sheet indicates that based on 2004-2005 data, the Springfield Regional Wastewater Treatment Plant was meeting EPA's TMDL waste load allocation (WLA) of a 25% aggregate reduction from out-of-basin nitrogen sources. Nitrogen out-of-basin point source loading information for the Connecticut River in 2004-2005 is provided in Attachment G of the Permit Fact Sheet. Out-of-basin sources include Massachusetts, New

Hampshire, and Vermont. Without a permit limit, there is no assurance that the TMDL reduction and any type of nitrogen removal will continue.

Recent data from the past five years show that the Springfield Regional Wastewater Treatment Plant is no longer meeting that reduction goal (on an individual plant basis). Page 19 of the Permit Fact Sheet indicates that: "The current annual average TN [total nitrogen] load is 631 lbs/day greater than the 2004-2005 estimated load from this facility." This directly violates the Enhanced Implementation Plan (EIP), which Massachusetts Department of Environmental Protection (MADEP) and EPA agreed to honor in 2011. This increased nitrogen loading over the last five years is the equivalent of backsliding and further demonstrates that, without a permit limit, there is no assurance that the Springfield Regional Wastewater Treatment Plant will meet necessary nitrogen reductions.

On Page 19 of the Permit Fact Sheet, EPA continues to say that "Applying the revised Springfield benchmark to the 2004-2005 baseline loading results in a revised estimated loading of 14,467 [lbs/day of nitrogen] for the other Massachusetts facilities discharging to the Connecticut River, which is still less than the TMDL target for the Connecticut River of 16,254 lbs/day (see Table 5)." However, the draft permit does not take into account recent point source data for the rest of Massachusetts, or for New Hampshire and Vermont.

On Page 21 of the Permit Fact Sheet, EPA states that "Based on current facility operation, the TMDL target of a 25% reduction in TN loadings from baseline loadings would be achieved, since recent data indicates that the estimated load to the Connecticut River from out-of-basin point sources has actually decreased well below the 2004-2005 estimate." No data have been provided in the draft permit to support this assertion. This also does not take into account the trend that EPA is currently pursuing to allow wastewater treatment plant nitrogen loads greater than the 2004-2005 baseline cap.

It is incumbent for EPA and MADEP to adopt a comprehensive nitrogen control plan for all the wastewater treatment facilities that discharge nitrogen to LIS via the Connecticut River, as it has been done in Connecticut and New York State. Yet here we are, in 2018, almost 20 years post-TMDL and there is no enforceable nitrogen reduction permit limits for wastewater treatment plants along the Connecticut River in Massachusetts. This is inconsistent with the LIS TMDL, which states on page 40 of the December 2000 document entitled *A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* that "[T]the enforceable mechanism to ensure reductions are attained will be state and federal permitting programs."

CTDEEP made similar comments regarding Springfield Regional Wastewater Treatment Plant's last permit and was ignored. It is unacceptable to wait, from issuance of this permit, another 5 years for EPA to do the right thing. We demand that EPA require the Springfield Regional Wastewater Treatment Plant to meet a nitrogen permit limit that maintains a level of treatment that we know it can already achieve, and for which will not require more capital improvements. Our request is more than reasonable. Anything less would suggest that EPA has set a lower bar for non-delegated states such as Massachusetts as compared to delegated states such as Connecticut and New York. Nitrogen WLAs for Connecticut and New York's wastewater treatment plants are established as pounds per day in timely issued and legal permits. Connecticut intends to aggressively seek all remedies should

EPA not follow the appropriate procedures and processes in its issuance of the Springfield NPDES permit by not including an enforceable permit limit for nitrogen.

Combined Sewer Overflows – CSOs

In Attachment D of the Permit Fact Sheet, we note that it appears that the volumes reported in 2016 are off by about three orders of magnitude when compared the other years' volumes. We request that the volumes reported in Attachment D be verified and revised as appropriate.

On Page 26 of the Permit Fact Sheet, EPA indicates that: "CSOs have been identified as a significant source of pollution to the Connecticut and Chicopee Rivers. See 2003 Connecticut River Water Quality Assessment Report (MADEP, 2003) and Chicopee River Watershed 2003 Water Quality Assessment Report (MADEP, October 2008)." No data are provided to quantify the volume of combined flow that will be removed from the Connecticut River and conveyed to the Springfield Regional Wastewater Treatment Plant as a result of upgrading the York Street Pump Station and Connecticut River Crossing pipes. No data are provided to show how much annual CSO discharge volume will be reduced as a result of these efforts.

CTDEEP requests that EPA add a permit condition requiring the SWSC to complete more river testing downstream at the Massachusetts/Connecticut state border. Bacteria from CSOs are causing and contributing to water quality problems in the Connecticut River. As we previously noted in our July 5, 2012 comment letter, the CWA and its regulations address the need for consideration of boundary and multijurisdictional effects on water quality. No NPDES permit may be issued when the imposition of conditions cannot ensure compliance with the applicable water quality standards and requirements of all affected States. The Permit Fact Sheet fails to demonstrate that the discharges from the Springfield Regional Wastewater Treatment Plant or the CSOs meet Connecticut Water Quality Standards. This is inconsistent with EPA's Clean Water Act (CWA) requirements.

The Integrated Wastewater Plan submitted by SWSC to EPA in April 2014, which updated the 2012 CSO Long Term Control Plan, has not been approved by EPA. The SWSC 2014 Integrated Wastewater Plan proposes a 40-year implementation schedule and a 3-month level of control for Springfield's CSOs. It does not appear that additional water quality sampling was performed for the 2014 Integrated Wastewater Plan. Again, we note that both the 2012 CSO Long Term Control Plan and the 2014 Integrated Wastewater Plan only focused on CSOs discharging to the Connecticut River. Four (4) CSOs remain to the Chicopee River and seven (7) CSOs remain to the Mill River, but no additional reduction efforts for these CSOs are planned.

Meanwhile, in the absence of EPA disapproving the 2014 Integrated Wastewater Plan, as it should, it appears to the regulated community that this CSO reduction plan is acceptable. As a result, consultants working in Massachusetts and Connecticut point to the SWSC 2014 Integrated Wastewater Plan as proof that EPA finds a 40-year implementation schedule and a 3-month level of control acceptable. Both the extended implementation schedule and paltry level of control are unacceptable. As we previously noted in another comment letter (dated December 4, 2014), EPA has pushed for shorter schedules and higher expenditure rates for similar Connecticut CSO communities, as well as higher levels of control.

Again, this implies a lower bar regarding CSO reduction for non-delegated states such as such as Massachusetts as compared to delegated states such as Connecticut. It is obvious that our repeated comments regarding this inequity have been ignored. It is imperative that EPA Region 1 demonstrate a level regulatory playing field and mandate a more aggressive CSO reduction strategy be undertaken in Springfield; the lack of which, has a direct negative bearing on the water resources of Connecticut.

Conclusion

For all the above reasons, as well as those included in our February 7, 2018 comment letter, we find that the draft permit as written is unacceptable. We are demanding that EPA Region 1 add a twelve month rolling average nitrogen load limit of 1,648 pounds per day into the table on Page 4 in Part I.A.1 of the draft permit. We are also demanding that EPA add a permit condition to complete more river water quality testing downstream at the Massachusetts/ Connecticut state border. We ask that the attached February 7, 2018 comment letter, along with this testimony dated April 24, 2018 be entered into the official hearing record.

Response 61

The Agencies agree that a total nitrogen effluent limit is necessary for this facility and other large out-of-basin dischargers to LIS. EPA and MassDEP withdrew all three of the proposals for nitrogen controls offered in the 2017 Draft Permit and replaced them with a new proposal that includes a total nitrogen effluent limit in the 2018 Draft Permit for the reasons stated in the Fact Sheet Supplement issued with the 2018 Draft Permit. Also see General Response.

With respect to the above comments regarding CSOs, EPA acknowledges that the notation for CSO discharge volumes for 2016 that were presented in Attachment D to the Fact Sheet should have been "gallons", and not "1,000's of gallons." This correction is noted for the record (see Response 31).

Please see Response 58 regarding the reductions in CSO discharge volumes that are anticipated upon completion of the Phase 2 CSO projects (which includes the upgrade of the York Street Pump Station and the Connecticut River Crossing pipes).

With respect to the commenter's request to include requirements in the permit to monitor CSOs and downstream segments of the Connecticut River for bacteria, such requirements have not been included in the Final Permit. Being the largest watershed in New England, there are many point and non-point source discharges to the Connecticut River which contribute to bacteria inputs which may, at times, impact water quality. In addition to such burdensome monitoring requirements being outside the scope of a NPDES permit, imposing requirements on only one of these sources to conduct such extensive monitoring would yield data that, in the absence of data from the other sources of bacteria inputs, would be of limited utility, since any water quality impacts are not the result of an isolated discharge. EPA does, however, support any additional sampling that the Permittee may choose to undertake, and they are encouraged to collaborate with both Massachusetts and Connecticut (as well as any other interested stakeholder) to develop and implement a program for sampling the reach of

the Connecticut River downstream from the SWSC's discharges at the state border. As stated in the above comment, CSOs negatively impact water quality in the Connecticut River. Part I.B.2.b. of the Final Permit prohibits discharges from CSOs from causing or contributing to violations of federal or state Water Quality Standards and as such, is protective of state water quality standards. Violations of this condition will be addressed through enforcement actions.

Although CSO projects on the Mill and Chicopee rivers were conducted in the 1990's and 2000's, EPA is aware that discharges from these CSOs exist and that they have exceeded the anticipated levels of control. The SWSC has expressed their intention to further evaluate these discharges as part of their ongoing CSO work.

With respect to the concerns expressed in the above comment regarding the adequacy of the permittee's CSO reduction strategy and the Integrated Waste Plan (IWP), EPA's Region 1's Enforcement and Compliance Assurance Division (ECAD) continues to work with the permittee on the development of this document and any adjustments that may be necessary. The CSO Policy states that "Permittees should develop and submit [the] long-term CSO control plan as soon as practicable, but generally within two years after the date of the NPDES permit provision, Section 308 information request, or enforcement action requiring the permittee to develop the plan." 18688 Fed. Reg. at 18691. EPA issued an Administrative Order in September 2014,[48] which required the Commission to implement projects identified in its IWP (which incorporates the LTCP). EPA Region 1's ECAD continues to monitor implementation of the IWP and ensure that schedules are adjusted to reflect new information and evolving financial considerations as necessary and appropriate. Region 1's decision not to disapprove the Commission's IWP should not be construed to imply that Region 1 believes that implementation of the Plan without further adjustments and activity would necessarily result in cessation of discharges resulting in excursions from Massachusetts WQS.

EPA disagrees with the assertion that the permit fails to ensure protection of Connecticut water quality standards. The permit requires that the discharges from the WWTF "shall not cause a violation of the water quality standards of the receiving waters," Part I.A.1.a, and the discharges from the CSOs "shall not cause or contribute to violations of federal or state Water Quality Standards." Part 1.B.2.b. In other words, a discharge from either the WWTF or the CSOs which violates Connecticut water quality standards would not be permitted by this permit. Further, EPA understands that discharges from the CSOs have not been able to meet permit limits, especially with regards to bacteria. This is the subject of ongoing enforcement action taken by the Enforcement and Compliance Assurance Division. This permit does not allow for bacteria discharges that violate water quality standards.

Moreover, with regard to bacteria specifically, this permit contains numeric water quality-based effluent limitations for E. coli based on Massachusetts' water quality criteria found at 314 CMR 4.0. EPA has compared Connecticut's criteria for bacteria with Massachusetts' criteria and concluded that that Massachusetts' is at least as stringent.

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[48] Letter from Susan Studlien, Director, Office of Environmental Stewardship, EPA Region 1, to Kathy Pedersen, Executive Director, Springfield Water and Sewer Commission, *Subject: NPDES Permit No. MA0103331; Administrative Order Docket No. 14-007* (dated Sept. 18, 2014).

XV. Comments Submitted By Denise Ruzicka, P.E., Director, Water Planning and Management Division, Bureau of Land Protection and Water Reuse, CTDEEP, by Letter Dated April 27, 2018

Comment 62

Mr. Joshua Schimmel, Executive Director of the Springfield Water & Sewer Commission (SWSC), commented at the public meeting before the hearing on Tuesday night that Springfield cannot implement as much CSO reduction work as communities in Connecticut, because Massachusetts does not have the same funding opportunities for wastewater improvement projects that are available to Connecticut. He specifically citing our 50% grant for CSO projects.

We wish to note that communities like Hartford are similar in size and economic condition to Springfield. If we compare the portion of project costs that are not subsidized by grants, the Metropolitan District (MDC) has spent over $320 million in the last five years and is expected to bid $190 million in new CSO contracts in the next twelve calendar months. Complete implementation of the TMDL by 2026 is expected to result in MDC paying for $1.5 billion of the overall $2.1 billion cost; compared to the $100 million dollars that Springfield has spent to date and the additional $183 million that is proposed for CSO control in the Connecticut River in the 2014 Integrated Wastewater Plan.

Also, the LTCP for MDC provides for the elimination of all CSO discharges in a typical year by the year 2029. This represents a reduction of one billion gallons of CSO discharges in a typical year. Meanwhile, it appears that 59 million gallons per year will continue to be discharged from Springfield's CSOs in a typical year after the last CSO project is completed in 2031. This demonstrates that Springfield is in no way doing an appropriate or commensurate amount of CSO reduction activities. The Environmental Protection Agency (EPA) must require Springfield to do more.

Response 62

EPA's ECAD continues to work with the SWSC on the implementation of the CSO controls identified in the LTCP and in refining future projects as needed so as to achieve the highest level of CSO control afforded by the Commission's financial capability.

Comment 63

We request that the NPDES permit require that Springfield's CSOs are tested for nitrogen on a recurring basis. The amount of currently unaccounted-for nitrogen loading to the Connecticut River and Long Island Sound (LIS) attributable to CSOs and other bypasses must be measured, recorded and annually reported through a permit condition.

Response 63

EPA requires monitoring in a NPDES permit when the data is necessary in order to make future permit decisions or compliance with a permit requirement. EPA does not anticipate

including numeric nitrogen effluent limits for CSO outfalls in the future. Although CSOs do intermittently contribute some nitrogen to the Connecticut River, the load is relatively small compared to the loading from the constant discharge from wastewater treatment plants. For example, in 2016, a very wet year, Springfield discharged 160 million gallons through its CSOs and (2017 Fact Sheet, page 27). At an estimated concentration of 5 mg/L total nitrogen (2018 Fact Sheet Supplement, page 4), the annual average load for 2016 from CSOs was 18 lb/day, or much less than the SWSC treatment facility outfall 001 annual average load of 1,643 lb/day. In addition, requiring monitoring of multiple CSOs for nitrogen would create a very challenging weather-driven sampling burden for the Permittee since there are no other CSO sampling requirements currently in the permit. Therefore, such a requirement has not been included in the Final Permit.

Comment 64

Due to the direct impact on the health of the public recreating and using the Connecticut River, EPA must protect our citizens by inserting into the NPDES permit required notification to Connecticut residents within two hours whenever any of the Springfield CSOs or other bypasses are activated. Notification based on predictive rainfall modeling would be sufficient. In addition, SWSC must be required to notify the CTDEEP when any bypasses occur including CSOs which reach the CT River due to the adverse impact on Connecticut Water Quality during such events. Timely notification is critical in order to protect public health through proper notification to the public.

Response 64

EPA released a revised Draft Permit for public comment on August 17, 2018 which contained revised public notification requirements. These requirements include an initial notification of a probable CSO discharge which shall be posted on a website within two hours of becoming aware (through modeling, modeling or other means) that a CSO discharge may have occurred, followed by a supplemental notification which shall also be posted on a website within twenty-four hours of becoming aware of the termination of a discharge. The initial notification shall include the CSO outfall number, location, date and time of the probable discharge. The supplemental notification shall confirm the occurrence of a CSO discharge and list the CSO outfall number and location where the discharge occurred. Lastly, the Revised Draft Permit requires an annual notification to be posted on a website to include the locations of the SWSC's CSOs, a summary of CSO activations and volumes, the status and progress of CSO abatement work, and information relative to the impacts of CSOs on water quality. See Response 42 for further discussion regarding public notification requirements.

Comment 65

We are concerned about the resistance the SWSC has raised regarding the reclassification of OF-42 as a CSO. If OF-42 is not a true CSO as Mr. Schimmel suggests in his February 9, 2018 comment letter, then this is an unauthorized plant bypass which cannot be permitted and must be treated as a violation when activated. Additionally, we request that CTDEEP be notified whenever this overflow is activated.

Response 65

As discussed in Response 3, outfall 042 is identified as a CSO in the Final Permit. Discharges from outfall 042 must be reported in accordance with the public notification requirements in Part I.B.3.g. of the Final Permit.

Comment 66

Finally, we wish to strongly reiterate our demand that this NPDES permit contain an enforceable nitrogen load limit of 1,648 lbs/day in the table on Page 4, Section I.A.1. According to the LIS TMDL, "The enforceable mechanism to ensure reductions are attained will be state and federal permitting programs." Note the imperative words of "enforceable mechanism".

Furthermore, the LIS TMDL states that concentration limits are not acceptable for tracking nitrogen. Note the following language taken directly from the LIS TMDL:

"CWA Section 303(d) requires the establishment of TMDLs for pollutants that will result in the attainment of water quality standards. As the term implies, TMDLs are often expressed as maximum daily loads. However, as specified in 40 CFR 130.2(I), TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measures. As presented in Section V.C., nitrogen loadings throughout the year contribute to the pool of nitrogen available for uptake by phytoplankton. Hypoxia resulting from the ultimate decay of that phytoplankton is not sensitive to daily or short term nitrogen loadings. Daily load allocations are not necessary to ensure that standards are met. Instead, DO levels are a function of annual loading rates. While hypoxia generally occurs from June through September, nitrogen loadings throughout the year contribute to the pool of nitrogen available for uptake for phytoplankton. The LIS 3.0 model did not show a strong relationship between hypoxia and the seasonality of nitrogen loads to Long Island Sound that would warrant special attention to seasonal management of nitrogen. This is because algal growth occurs over seasonal and annual cycles where the total pool of nitrogen available is the critical factor. This supports the use of a maximum annual load used in this TMDL, rather than seasonal or daily load limits. Therefore, the TMDL/WLA [Waste Load Allocation]/LA [Load Allocation] is presented as an annual load in tons per year."

Therefore, based upon the LIS TDML, only a load limit for nitrogen is acceptable. A concentration limit would not be consistent with the intent of the LIS TMDL. Failure of the Springfield NPDES permit to contain a load amount for nitrogen is therefore, inconsistent with the established LIS TMDL.

Response 66

EPA released a revised Draft Permit for public comment on August 17, 2018 which contained a proposed nitrogen effluent limit of 2,534 lbs/day. This limit has been adjusted slightly in the Final Permit and is now established at 2,794 lb/day. This is described in the General Response at the beginning of the Response to Comments. Also see the General Response for a comprehensive explanation of the overall approach EPA has adopted to address TN effluent limitations for out-of-basin POTWs discharging to Long Island Sound.

XVI. Comments Submitted by Denise Ruzicka, P.E., Director, Water Planning and Management Division, Bureau of Land Protection and Water Reuse, CTDEEP, by Letter Dated October 15, 2018

Comment 67

Nitrogen

In regards to nitrogen, the revised draft permit now includes a total nitrogen limit in pounds per day as a monthly average based on the twelve month rolling average. This total nitrogen limit of 2,534 pounds per day is 11% higher than the optimization benchmark proposed in the initial draft permit and significantly greater than CTDEEP's request for a permit limit of no more than 1,648 pounds per day as contained in our previous comment letters and public hearing testimony. In addition, EPA acknowledges in its 2018 Fact Sheet Supplement that the proposed nitrogen permit limit is 886 pounds per day above the 2004-2005 baseline cap (1,648 pounds per day). It is inconsistent with EPA's own Nitrogen Reduction Strategy for Long Island Sound, for EPA to allow increased nitrogen loading to the Connecticut River above the 2004-2005 baseline cap. However, we recognize that EPA has taken an important first step in adding an enforceable nitrogen loading limit to the Springfield Regional Wastewater Treatment Facility permit. CTDEEP expects continued efforts to achieve and maintain the 2004-2005 baseline cap, including reduced total nitrogen limits in future permit renewals.

Response 67

As discussed more fully in overview of the General Response at the beginning of this response to comments, EPA is adopting a systemic permitting approach that includes continued optimization with effluent limits that provide assurance that long term loads will not increase. The permit allocates the current TN load so that: the aggregate out-of-basin TN load does not increase; effluent limits are annual average mass-based; consistent with the assumptions of the TMDL, no individual facility is left with an effluent limit that is not achievable using readily available treatment technology at the facility's design flow; and smaller facilities can achieve their limits through optimization. Under this systemic permitting approach, nitrogen effluent limits and/or optimization will be pursued for all facilities in Massachusetts (see Appendix A) and is designed so that nitrogen loadings to LIS will not increase.

Comment 68

Combined Sewer Overflows

The revised draft permit will require the permittee to provide the public and any other potentially affected party with notification of CSO activations in Springfield. We concur with this new requirement, which begins to align the Commonwealth of Massachusetts with several of its neighboring states (New York State, Vermont, and Connecticut) in timely public notification of occurrences of untreated wastewater discharges. These CSO discharges, of combined stormwater and sewage, are a cause of bacteria impairments to the Connecticut River and also contribute to water quality concerns, which compromise the use of the river by Connecticut's citizens. As such, timely notification is critical in order to protect public health. The permittee will also be required to

post an annual CSO report online, which will heighten public awareness of the regular frequency and durations of CSO activations into this portion of the Connecticut River, which quickly flows directly into our State of Connecticut.

CTDEEP, as a public landowner with properties along the Connecticut River is an affected party impacted by CSO releases. As such, notification to CTDEEP should be an expressed requirement of the Public Notification Plan and specifically noted as a condition in the final permit. In addition, all Connecticut River municipalities within a forty-eight-hour time of travel downstream of the Massachusetts/Connecticut border should also be specified for notification within the Public Notification Plan. The citizens of these downstream municipalities are all potentially affected parties.

We wish to reiterate a major item that was not addressed by the revisions to the draft permit. In testimony submitted on April 24, 2018, CTDEEP requested that EPA add a permit condition requiring the permittee to complete more water quality testing of the Connecticut River downstream at the Massachusetts/Connecticut state border. CTDEEP continues to believe that the amount of currently unaccounted-for nitrogen loading to the Connecticut River and Long Island Sound attributable to CSOs and other bypasses must be measured, recorded, and annually reported through a permit condition. In fact, additional nitrogen data is clearly needed since EPA used an assumed total nitrogen concentration of 5 milligrams per liter in CSOs to determine an allowable nitrogen load increase based on the completion of certain CSO abatement tasks. A calculation of nitrogen concentrations in Springfield CSO discharges must be based on factual data collection and not assumptions.

Response 68

The notification requirements contained in the revised Draft Permit, including the requirements in Part I.B.3.g. to provide the general public with notification of CSO are inclusive of all categories of the public, including the downstream State of Connecticut. Also see Response 42.

With respect to the commenter's concern regarding conducting monitoring in the receiving water, while EPA supports the collection of ambient water quality data to better understand nitrogen loadings to the Connecticut River, requiring the Permittee to do so is not necessary at this time, since a comprehensive monitoring program consistent with the commenter's proposal is already being carried out. EPA is aware of a collaborative effort between MassDEP, the USGS and the SWSC to conduct water quality monitoring in the Connecticut River to better understand nitrogen loading to the river. Specifically, MassDEP is funding the USGS to carry out a fixed flow and water quality monitoring network in the reach of the Connecticut River that flows through Massachusetts. This network includes two sites on the Connecticut River (Connecticut River at Northfield, MA (just south of the NH/VT border) & CT River at Thompsonville (near the MA/CT border)) and four sites along major tributaries to the Connecticut River (Chicopee, Westfield, Deerfield, and Millers Rivers. The SWSC is contributing funding for the Northfield streamflow gage and water quality site. The sites are visited monthly, except for the Northfield site, which is visited 42 times/year (roughly weekly). The sites are sampled/monitored for: nutrients, temperature, conductance, dissolved oxygen, pH, turbidity, alkalinity, *E. coli*, organic carbon, major ions, and trace elements.

Streamflow data collected at these sites will be used to estimate mass discharge and calculate nitrogen loading. The monitoring plan proposed by the commenter has a large scope that implicates many sources of nitrogen loading into the Connecticut River and waters downstream, and in EPA's judgment, is better suited to be carried out by federal and state agencies, rather than a single discharger. There may, however, be a role for individual dischargers to supplement these data collection efforts through targeted monitoring to fill any gaps that might become apparent. EPA reserves the right to include ambient monitoring requirements in future permits or to seek this information, as necessary, through its authority under section 308 of the Act.

EPA encourages CT DEEP to collaborate with MassDEP, USGS, the SWSC and any other stakeholders to develop and implement an ambient monitoring program.

Comment 69

Lastly, CTDEEP notes several inaccuracies in the 2018 Fact Sheet Supplement included with the revised draft NPDES permit. Information regarding these inaccuracies and mischaracterizations is included as Attachment 2 (shown below). CTDEEP respectfully insists that EPA make the appropriate corrections to this fact sheet as part of final permit issuance.

Attachment 2
2018 Fact Sheet Supplement Inaccuracies

Page 2, Section 2. Background:

CTDEEP supported Connecticut Fund for the Environment's request for a public hearing. CTDEEP did not independently request a public hearing.

Page 4, first paragraph:

The Springfield Water and Sewer Commission (SWSC) does not have a CSO Long Term Control Plan that has been approved by EPA or MADEP. CSO abatement measures are being undertaken pursuant to EPA Administrative Order Docket No. 14-007, which was issued in September 2014. It is therefore inappropriate and inaccurate to recognize SWSC's 2014 Integrated Wastewater Plan, which incorporates their CSO Long Term Control Plan, as directing CSO projects as these documents are unapproved and non-- binding. Recognition of these CSO projects must only cite EPA Administrative Order Docket No. 14-007.

Attachment A- Springfield Regional Waste Water Treatment Facility-Annual Average Total Nitrogen (2007-2017):

In this data table, columns for Total Nitrogen (mg/1) and Total Nitrogen (lbs/day) appear to be duplicated. Outliers are presented in red in the table, but it is indicated that outliers were omitted from any analysis. However, the methodology used to determine outliers is missing.

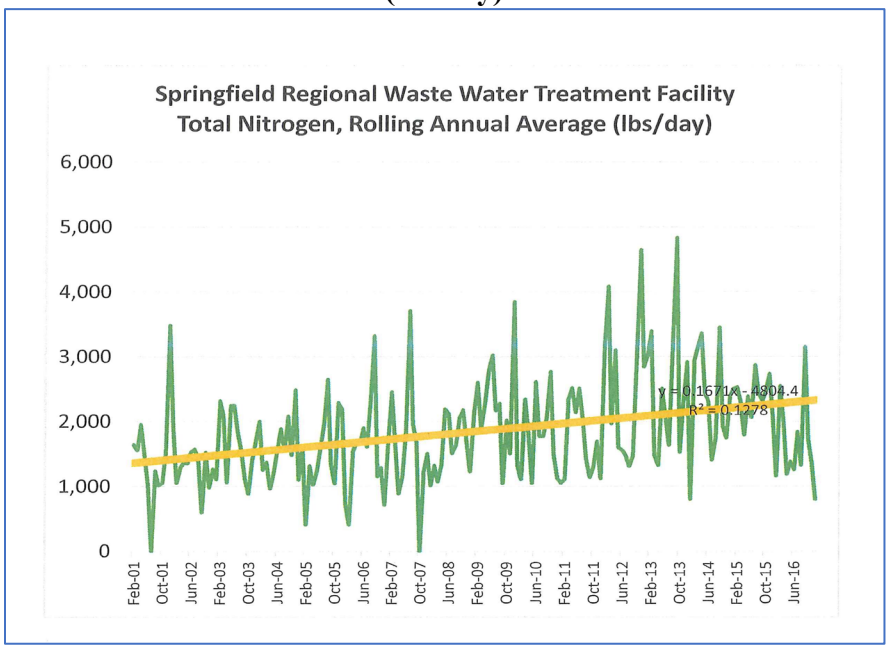
The 2018 Fact Sheet Supplement includes a table of total nitrogen data, as well as two charts used to plot the total nitrogen load over the previous ten years as an average annual load and

rolling average. Using total nitrogen data from the last ten years only, resulted in a gently sloping (or flattened) trend line. EPA use of the last ten years of data is a practice, not a requirement. In cases such as Springfield, where the permit period has been much longer, the entire period between permit issuance should be utilized for data analysis and permit review.

An upward trend in total nitrogen loading is evident, although the 2018 Fact Sheet Supplement states that it "may be increasing". In fact, the data and the upward trend is obvious-the nitrogen loads are increasing. When data from the entire dataset (2001- 2016) are plotted, the increase in total nitrogen loading is greater, since total nitrogen loading data for 2001-2007 was less than the most previous ten year dataset. A copy of the chart for the entire dataset is included as Attachment 3(shown below) for EPA's information. We request that EPA use the entire dataset for total nitrogen loading analyses, as it more fully represents the SRWWTF performance throughout most of its permit cycle.

Attachment 3: Chart of total nitrogen rolling annual average using data from 2001-2016. The chart demonstrates an increasing total nitrogen load over the course of 15 years.

Springfield Regional Waste Water Treatment Facility Total Nitrogen, Rolling Annual Average (lbs/day)



Response 69

This correction is noted herein for incorporation into the administrative record.
EPA notes the following clarifications and corrections to the Fact Sheet Supplement for the record:

Page 2, Section 2, Background: EPA acknowledges that CT DEEP supported the Connecticut Fund for the Environment's request for a public hearing.

While the IWP and LTCP have not been approved, they have not been disapproved. Administrative Order Docket No. 14-007 requires the implementation of elements of both the LTCP and IWP.

With respect to the total nitrogen data that was presented in the 2018 Fact Sheet Supplement, EPA notes that Attachment A included two columns labeled "Total Nitrogen (lbs/day)," with one of the columns including all of the data that was reported to EPA, and the other column excluding what appears to have been a reporting error, given that it was several magnitudes greater than the other results. EPA classified this single value from 10/31/2007 as an "outlier" and excluded it from any analyses

EPA acknowledges the remaining comments pertaining to the data presented in 2018 Fact Sheet Supplement.

COMMENTS SUBMITTED BY THE CONNECTICUT RIVER CONSERVANCY ("CRC")

XVII. Comments Submitted by Andrea F. Donlon, River Steward, CRC, by Letter Dated February 12, 2018.

Comment 70

The protection of existing uses is required under 40 CFR 131.12(a)(1). Below is our understanding of existing uses in the area affected by the SWSC system.

- Medina Street Boat ramp – located just upstream of the confluence with the Chicopee River. A popular launching point for motor boats, especially in May and June.
- Chicopee River confluence – a popular 24-hr/day fishing location during migratory fish season.
- Pioneer Valley Riverfront Club – youth and adult rowing programs, dragon boating, running and biking. See http://www.pvriverfront.org/
- West Springfield boat ramp – new cartop boat ramp installed in the last 10 years.
- Bondi's Island Boat Ramp – boat ramp located just upstream of the WWTP.
- Pynchon Point – cartop access located just downstream of the confluence with the Westfield River.
- Springfield Yacht Club – located in Agawam, providing boat slips for motor boats and sailboats. See https://www.sycc.website/ .
- Pioneer Valley Yacht Club – located in Longmeadow, providing boat slips for motor boats, sailboats, and rowing access. See http://www.ourpvyc.net/ .
- Riverfront Park and Fannie Stebbins Wildlife Refuge – Longmeadow public boat access, trails, and nature area that is now part of the Silvio Conte National Wildlife Refuge

- Bike paths along the CT River in Springfield and Agawam – ideally, people use the riverfront area in Springfield and Agawam for recreation, although it gets some amount of homeless housing activity. People fish from the banks right next to CSO outfalls and where the Mill River discharges into the CT River.
- Thompsonville Boat Ramp in Connecticut – improved boat ramp for all types of craft, located a couple miles downstream of the MA/CT state line.

Response 70

EPA concurs with the comment and agrees that existing uses must be protected and maintained. These include the wide range of existing uses in LIS.[49] As noted above, EPA has determined that compliance with antidegradation requirements comprise one basis for the TN effluent limitation.

Comment 71

This section of the river, though urbanized, also contains important fish and wildlife habitat. Many migratory fish pass by the section of Connecticut River affected by the WWTP and CSOs on their way upstream from Long Island Sound, either on their way to the Westfield River, the lower Chicopee River, or the Connecticut River to the fish lift at the Holyoke Dam. These fish include the endangered shortnose sturgeon. In 2017, migratory fish numbers that passed above Holyoke are as follows: 11 Atlantic salmon; 536,670 American shad; 875 blueback herring; 451 striped bass; 85 federally endangered shortnose sturgeon; 740 gizzard shad; 21,526 sea lamprey; and 17,037 American eels. In 2017, 6,000 shad; 5 Atlantic salmon; 5 river herring; and 249 sea lamprey were counted at the fish ladder on the lowermost dam on the Westfield River.

Response 71

During the development of the draft permit, EPA communicated with and received concurrence from the National Marine Fisheries Service (NMFS) regarding EPA's determination the reissuance of the SWSC's permit is not likely to adversely affect any listed species or critical habitat under USFWS' or NMFS' jurisdiction.

Comment 72

CRC supports the inclusion of co-permittees in this permit, the towns of Agawam, East Longmeadow, Longmeadow, Ludlow, West Springfield, and Wilbraham.

Response 72

EPA acknowledges the comment.

[49] *See, e.g.*, https://portal.ct.gov/-/media/DEEP/coastal-resources/LIS_blue_plan/resourceanduseinventoryversion14september2019pdf.pdf.

Comment 73

CRC is glad that the permit has finally been updated to include a pathogen limit based on *E. coli* levels, rather than fecal coliform.

Response 73

EPA acknowledges the comment.

Comment 74

CRC supports the increased frequency of sampling of nitrogen compounds from monthly to weekly.

Response 74

EPA acknowledges the comment

Comment 75

CRC recommends that total phosphorus sampling be required as part of this permit. Eurasian water milfoil is present in the Connecticut portion of the Connecticut River. Understanding both the phosphorus and nitrogen inputs in the Connecticut River is important to understanding the spread of weeds like milfoil, as well as cyanobacteria outbreaks, if and when they occur.

Response 75

EPA agrees that a phosphorus monitoring requirement is appropriate in the Final Permit, for the reasons set forth in the comment. Currently, there are not sufficient phosphorus data available to determine whether the discharge has the reasonable potential to cause or contribute to an excursion of water quality standards in the receiving water. Therefore, EPA will require both effluent and ambient monitoring in the Final Permit and notes that this data will be useful in conducting a reasonable potential analysis in the next permit reissuance.

Effluent monitoring must be conducted twice per month from April through October of each year and reported as a monthly average concentration.

Ambient monitoring must begin in April of the first odd numbered year that occurs at least six months after permit issuance, and during odd numbered years thereafter, the Permittee shall collect monthly samples from April through October at a location in the receiving water upstream of the facility and analyze the samples for total phosphorus. Sampling shall be conducted on any calendar day that is preceded by at least 72 hours with less than or equal to 0.1 inches of cumulative rainfall. For the years that monitoring is not required, the Permittee shall report NODI code “9” (conditional monitoring not required).

Comment 76

Section I.B.3.b of the draft permit now requires that CSO structures and regulators be inspected once per month, down from twice weekly. Holyoke and Chicopee are required to do monthly inspection of their CSO structures also. CRC recommends the frequency be appropriate for finding and fixing problems that arise. We note that twice weekly may be burdensome, but once a month may not be often enough.

Response 76

EPA does not have any specific basis to conclude the inspection frequency of once per month would be inadequate, or that more frequent inspections would materially impact the operational integrity of the CSO structures. The Permittee is required to document any necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. Should EPA become aware of specific facts relating to this issue, it may revisit its determination. Part I.B.3.b. of the Final Permit remains unchanged from the Draft Permit.

Comment 77

Section I.B.3.d prohibits dry weather overflows. The previous CSO permit defined "dry weather" as less than 0.1 inch of precipitation or snowmelt in a calendar day. CRC recommends that a definition of dry weather be re-instated in the final permit.

Response 77

The definition of dry weather has been added Part I.B.3.d. of the Final Permit. Also see Response 10.

Comment 78

Section I.B.3.g requires a public notification plan. CRC notes that none of the CSO communities along the Connecticut River in Massachusetts appear to be doing any kind of public notification, despite permit requirements. We have been supportive of a sewage spill public notification bill going through the Massachusetts legislature. The proposed notification in the draft permit seems potentially unrealistic, given the challenge of having accurate data on when CSOs are discharging. We also think bypass flows and blended flows also be part of public notification. We'd be amenable to an automated notification built into the SWSC website, or a CT River centralized website, that would predict, based on rainfall data, where in the system there is likely to be a CSO activation (Chicopee River, Mill River, north/south CT River mainstem, and on the Bondis Island side). Making a table available to the public like that in Attachment D to the Fact Sheet (along with information on CSO outfall locations), would also be very helpful.

Response 78

See Response 42 regarding the notification requirements in the Final Permit.

Although the public notification requirements in the Draft Permit do not include the posting of information relative to bypasses of secondary treatment, EPA fully supports collaborative efforts towards making this information available through electronic means, such as those described in the above comment. However, since bypasses of secondary treatment are still subject to the permit effluent limits, there is no public risk associated with them beyond the normal discharge of effluent and no expectation that the public may want to change their behavior (such as temporarily avoiding contact recreation in the receiving water). Therefore, the permit has not been revised to include public notification for bypass events.

Comment 79

Section I.B.3.e requires National Weather Service precipitation data be recorded for each CSO discharge event. This information should also be included in the annual CSO report required in draft permit Section I.B.4 and the DMR data required in draft permit Section I.B.5.a.

Response 79

The Annual Report is a comprehensive summary made up of several elements, including a summary of all activities undertaken during the calendar year that demonstrate compliance with the Nine Minimum Controls, and a well as a summary of the CSO discharge and precipitation data that were collected in accordance with Part I.B.5. of the permit.

Comment 80

Section I.D.4 and I.D.5 requires a collection system map and a collection system operation and maintenance plan, respectively, and CRC thinks the requirement is appropriate.

Response 80

EPA acknowledges the comment.

Comment 81

Section I.G includes some new industrial pretreatment program requirements, of which we are supportive.

Response 81

EPA acknowledges the comment.

Comment 82

Section I.H. includes special conditions for nitrogen, which is new to this permit. The draft permit proposes an annual average mass discharge of total nitrogen capped at the existing average mass loading of 2,279 lbs/day. The Fact Sheet also provides two other alternatives for Total Nitrogen Optimization Benchmarks, based on a total nitrogen (TN) concentration benchmark of 8 mg/L, one including a loading benchmark based on existing flows, and one with no loading benchmark. CRC has discussed these three options with the SWSC and our understanding is that they prefer

Alternative 2, and feel that they can meet a concentration benchmark of 8 mg/L. Based on Attachment H to the Fact Sheet, the TMDL based on 2004-2005 used data from two years when the plant was discharging TN at concentrations between 0.988 mg/L (this seems wrong) and 7.29 mg/L. We aren't sure why, if Springfield has been doing N optimization, the concentrations have been consistently higher during the last several years.

The draft permit proposal of a loading benchmark of 2,279 lbs/day based on existing loading values is consistent with the way EPA has set Total Nitrogen limits for other NPDES permits in the Massachusetts part of the Connecticut River watershed. We looked at the nitrogen general permit in Connecticut, and see that the Hartford MDC facility, which has a design capacity of 80 MGD (20% larger than Springfield), has a limit of 2,377 lbs/day (only 4 % higher than the proposed limit for Springfield). This amounts to a TN concentration of 3.56 mg/L if you use the design flow of 80 MGD.

CRC notes that using existing flow to set limits is inconsistent with the approach EPA uses to establish loading values in all permits, such as BOD and TSS and also the "reasonable potential analysis for metals (Table 2 in the Fact Sheet). In this permit, they are all based on the design flow of 67 MGD.

CRC also notes that one phase in Springfield's Integrated Wastewater Plan is to provide 62 MGD pumping capacity at the York Street pump station and a new 48-inch diameter river crossing from the collection system to the WWTP, new storage, and conveyance for relief of the Connecticut River interceptor. If the end result of this is a higher capacity to treat larger volumes of wastewater, and EPA and MassDEP approved of this plan, then SWSC should not necessarily be penalized for treating extra volumes and not meeting TN targets based on the previous average flow of the plant.

If a loading value is calculated using the design flow of 67 MGD and a concentration of 8 mg/L, the total nitrogen would be 4,470 lbs/day. Should Springfield's flow increase, the permit would allow an unreasonably high TN loading amount, and for this reason, CRC does not support Alternative 2. Attachment H shows that between 2001 and 2016, the average total nitrogen concentration was 5.46 mg/L, and varied quite a bit from 0 (not a realistic number) to 15.23 mg/L. SWSC would seemingly not be able to meet an enforceable limit based on a 8 mg/L concentration limit consistently. Increasing the sampling from monthly to weekly will allow for better understanding of the performance, which emphasizes again that this permit should have been updated long ago.

<u>CRC recommendation</u>: CRC requests that EPA set an enforceable permit limit that is consistent with anti-backsliding provisions and is based on the design flow of the plant. We recommend that the average TN treatment performance of the facility over the past 15 years be used (5.5 or rounded up to 6 mg/L) to calculate a loading value of 3,073 lbs/day or 3,353 lbs/day, respectively. Then, subtract out a 25% reduction to be somewhat consistent with the approach of the current TMDL. This would mean a loading of 2,305 lbs/day (based on 5.5 mg/L) or 2,514 (based on 6 mg/L). Under current flow rates, the facility would seemingly have no problem meeting this limit. Under increased flows, the facility would also typically be able to meet this limit, when flows and concentrations are averaged over the course of the year. We believe this approach is consistent with the 2015 Long Island Sound Nitrogen Reduction Strategy -- capping WWTPs at or near current total nitrogen loads, yet also sensitive to the SWSC's plans to be sending and treating additional sewage volumes to the

WWTP. Future iterations of the permit will have the benefit of more data and a better understanding of nutrient loadings under the Nutrient Reduction Strategy.

Response 82

EPA and DEP withdrew all three of the proposals for nitrogen controls included in the 2017 Draft Permit and replaced them with a new proposal in the revised 2018 Draft Permit for the reasons stated in the Fact Sheet Supplement issued with the revised Draft Permit. Also see the General Response at the beginning of the Response to Comments Document.

Comment 83

We have several comments on the CSO overflow events and volumes shown in Attachment D. To start, we are assuming that the volumes for 2016 are an order of magnitude wrong, and were not properly converted to the 1,000's of gallons that the rest of the table was based on. We also recognize that estimation of CSO discharges is an imperfect science.

Construction to reduce discharges from the Mill River CSOs was completed in 2003. In 2000, the draft LTCP showed in Table 5-3 that the Mill River CSOs were discharging 134 times in a typical year with a volume of 61.21 million gallons (MG). Springfield's 2014 Integrated Wastewater Plan in Vol 1 appendix B indicates that the post-construction baseline activation frequency (based on 1976 as a typical year) is 15 times with a volume of 1.1 MG. Attachment D of the Fact Sheet indicates the Mill River system has been, in reality, discharging between 47-113 times per year, at a volume of 3.6-29.1 MG between 2012 and 2016. The latter year was one of the most severe drought years since the 1960's, and even then, annual discharge volumes were 300% more than designed. Improvement has been made, but not nearly as much as what was anticipated.

Construction to reduce discharges from the Chicopee River CSOs was completed in 2009. In 2000, the draft LTCP showed in Table 5-3 that the Chicopee River CSOs were discharging 92 times in a typical year with a volume of 22.55 MG. Springfield's 2014 Integrated Wastewater Plan in Volume 1 Appendix B indicates that the post-construction baseline activation frequency (based on 1976 as a typical year) is 3 times with a volume of 0.31 MG. Attachment D of the Fact Sheet indicates the Chicopee River system has, in reality, been discharging 32-82 times per year, at a volume of 1.9-11 MG between 2012 and 2016. The latter year was one of the most severe drought years since the 1960's, and even then, annual discharge volumes were 500% more than designed. Improvement has been made, but not nearly as much as what was anticipated.

Unless the Mill River and Chicopee River CSO abatement projects were not actually constructed as designed, it is evident that using 1976 as the typical precipitation year is a mistake. <u>CRC implores that EPA and DEP abandon the use of 1976 as the "typical year" in projects from this point forward, and use modern day climate data and climate predictions to design CSO projects</u>.

Response 83

See Response 31 regarding the CSO discharge volumes that were presented in Attachment D to the 2017 Fact Sheet.

See Response 61 regarding CSO discharges to the Mill and Chicopee Rivers.

With respect to the concerns raised in the above comment regarding the selection and use of 1976 in Springfield's IWP, EPA notes that the IWP is not an aspect of this NPDES permit. The City developed the IWP as part of its efforts working with EPA Region 1's ECAD to address CSOs. ECAD continues to work with the City to implement the IWP and make any adjustments as necessary and appropriate. The selection of this year as the "typical year" was made by the SWSC, and not EPA. EPA expects permittees to account for a variety of factors, including representative conditions, when selecting models and information that will be used to drive decisions relating to the selection and implementation of projects aimed at reducing and elimination CSO discharges as well as for evaluating compliance. Should permittees have reason to believe that a selected model, or other information, that served as the basis for the selection of specific CSO controls is not appropriate, they should notify both EPA and MassDEP and also revise and submit for review any LTCPs, IWPs and other relevant material for further review. Also see Response 51.

XVIII. Testimony Provided by Andrea F. Donlon, River Steward, April 24, 2018

Comment 84

My name is Andrea Donlon. I work for the Connecticut River Conservancy. We changed our name last year from Connecticut River Watershed Council to Connecticut River Conservancy.
But, we've been working for a long time on water pollution in the Connecticut River. We're a four state watershed organization. I'm the River Steward for the Massachusetts section of the river. And as an organization, we try to promote use of the river and protection of the river. And water quality is one of our key things that we work on.

So, we work with the Pioneer Valley Planning Commission on the website that is connecticutriver.us where we do bacteria testing on a weekly basis and post the results online 24 hours after sampling. And we have a lot of partner organizations that also post their data. And you can see the results online any time you're using the water.

So, we think that the Connecticut River is an amazing resource that the public should be able to use. And the public should have the information to see how is the river doing and how are people working on the river, making it better.

I submitted comments already to EPA, so I don't want to duplicate what I was saying in those comments. But, in terms of public access to information, for years, we were trying, pushing for an actual long term control plan. There was a draft in 2000 and it took 12 to 14 years to have the final version. And in the meantime, projects were being required that the public didn't have that much input on. Now, there's the integrated plan.

And for the nitrogen requirements that are proposed in the permit, most permits in the watershed have an optimization plan that's required to be submitted to EPA. And as you described earlier in

terms of the enforceability, you're going to be looking at the performance to the annual benchmark in concert with the optimization effort.

This permit, as drafted, doesn't require Springfield to submit an optimization plan. It sounds like there already has been one that EPA is aware of and DEP. But, the public hasn't really seen that. So, if that's going to be part of some enforceable mechanism, that creates a problem for the public to know, well, okay, what is the plan and how are they doing on meeting the plan. There's an annual submission requirement as all the permittees have on the progress towards the plan. And I guess, as a member of the public that tries to keep track of how various facilities are doing with their permit requirements, yes, these annual reports are public documents. And I could ask for them. But, it's not publicly posted anywhere. So, I would have to write a request.

So, I guess, in my opportunity to speak tonight, I want to suggest maybe that there could be a way, similar to the MS4 towns, they have their annual reports all posted online and you can find those. That perhaps, for CSO communities and the nitrogen communities, there could be some way of posting those reports online so that the public could be aware of how communities are doing in terms of meeting the optimization goals.

So that's mainly what I wanted to say tonight. Thank you.

Response 84

EPA acknowledges the comments and notes that EPA and DEP withdrew all three of the proposals for nitrogen controls that were included in the 2017 Draft Permit and replaced them with a new proposal in the revised 2018 Draft Permit which includes a total nitrogen effluent limitation as well as other conditions. Also see the General Response at the beginning of the Response to Comments, which provides a comprehensive explanation of the overall approach EPA has adopted to address TN effluent limitations for out-of-basin POTWs discharging to Long Island Sound.

Although the revised Draft Permit does not require the posting of reports, EPA fully supports collaborative efforts towards making this information available through electronic means, such as those described in the above comment. Additionally, all reports that are submitted in accordance with permit are available for inspection at EPA's Boston office or by request.

XIX. Comments submitted by Andrea F. Donlon, River Steward, CRC, by letter dated October 15, 2018

Comment 85

Revised TN Loading Limit

EPA and MassDEP now propose to set an annual average TN loading limit of 2,534 lbs/day, rather than an optimization benchmark of 2,279 lbs/day. The revised draft permit would also allow the permittee to allow incremental TN increases after certain projects are completed by the permittee, as shown in Table 1 of the 2018 Fact Sheet Supplement and Attachment E of the revised draft permit.

CRC can support these proposed changes. The new limit is enforceable, reasonable for the permittee to meet, and in keeping with the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL). While CRC thinks the allowable TN increases as laid out in Attachment E of the revised permit may not be necessary if the permittee can successfully optimize or reduce nitrogen, we do not object to the proposal.

Response 85

EPA acknowledges the comment. The incremental increases allowed in the 2018 Draft Permit have been removed since the effluent limit has been increased to 2,794 lb/day. The revised effluent limit accounts for any incremental increases anticipated from CSO projects, consistent with the loads allocated to other CSO communities in the LIS watershed. See General Response.

Comment 86

CSO Notification Requirements

EPA and MassDEP have updated the revised draft permit Part 1.b.3.g to require a public notification plan that will inform the public of probable CSO activation and termination of CSO discharges. CRC fully supports the proposed changes to the revised draft permit. As we said in our previous comments, CRC has never been notified of CSO discharges and we have not been able to find any press releases or websites that indicate public notification by the permittee of CSO discharges under the existing requirements of the current permit. We would like to see the Springfield Water and Sewer Commission work with EPA and MassDEP, with consultation from stakeholders, to work on developing a website that provides notification of CSOs and any other unplanned releases from their facility. The website could be set up to work in conjunction with other communities, akin to the one in CT and VT that report CSO and sewage spills across the state. CRC has supported new legislation in Massachusetts that would make this a requirement. See the CT web page at https://www.ct.gov/deep/cwp/view.asp?a=2719&q=525758&deepNav_GID=1654 (there is a link to a real-time map which brings up text about locations and volumes of recent CSO discharges) and the VT web page at https://anrweb.vt.gov/DEC/WWInventory/SewageOverflows.aspx.

Response 86

The public notification requirements in the revised Draft Permit were developed to provide relevant and accessible information on discharges from CSOs to any interested party. As such, the language in Part I.B.3.g.(1). of the Final Permit has been modified to require notifications of CSO activations to be posted on the Permittee's website. This requirement, which was included in the draft permit which went out for public comment on November 11, 2017, was inadvertently omitted from the revised Draft Permit.

EPA encourages collaboration between stakeholders and permittees on the development of a website for providing notification of discharges from CSOs. See Response 39.

Comment 87

CRC requests that EPA revise new permits issued from this point on, including this permit, to include a requirement that any report to be submitted to EPA and MassDEP be done so in electronic form with a submission email address. CRC has had a difficult time obtaining annual nitrogen optimization and annual CSO reports in the Connecticut River watershed from both agencies. If the reports were submitted electronically, they would be relatively easy to post online and/or provide to members of the public without a complicated FOIA process. Recently, CRC requested a series of annual nitrogen optimization reports, nitrogen optimization analysis reports, and annual CSO reports from MassDEP and EPA, and neither agency appeared to have all of them and it was difficult to obtain them all because some would have needed to be scanned. In contrast, annual NPDES MS4 reports in Massachusetts are all available on an EPA website and are easy to review.

Response 87

All reports submitted in accordance with the Final Permit shall be submitted in electronically to EPA, in accordance with Part I.I. of the Final Permit. This requirement represents a change from the 2005 permit which, among achieving other objectives, will centralize material, including data and reports, submitted in accordance with the permit. Although EPA is not able to meet the administrative burden necessary to post online annual CSO reports from all of the CSO communities for which it issues NPDES permits, Region 1's Office of Water is able to provide these reports upon request.

Comment 88

CRC continues to request that monthly Total Phosphorus testing be required in the new permit.

Response 88

See Response 75.

COMMENTS SUBMITTED BY THE CONNECTICUT FUND FOR THE ENVIRONMENT, INC., AND ITS BI-STATE PROGRAMS SAVE THE SOUND AND THE LONG ISLAND SOUND SOUNDKEEPER

XX. Comments Submitted by the Connecticut Fund for the Environment, Inc., and its Bi-state Programs Save the Sound and the Long Island Soundkeeper, by Letter Dated February 7, 2018

Opening Comment

The Connecticut Fund for the Environment and its bi-state programs Save the Sound and the Long Island Sound Soundkeeper, submit the following comments on the draft National Pollutant Discharge Elimination ("NPDES") Permit for the Springfield Regional Waste Water Treatment

Facility ("SWWTF") and 24 Combined Sewer Overflow (CSO) discharges at 24 CSO outfall locations. The draft permit integrates the Springfield Water and Sewer Commission's ("SWSC") two existing permits for the publicly owned treatment facility at Bondi Island and for 24 CSO outfalls in Springfield and Agawam that discharge into the Connecticut, Chicopee and Mill Rivers into a single permit. The draft permit replaces the existing permit for the SWWTF issued on December 8, 2000, which has been administratively continued without modification for the past twelve years, and the existing CSO outfalls permit issued in November 2009 and administratively continued on September 15, 2014. The draft permit also includes as co-permittees the six towns that operate sanitary waste water collection systems that discharge flows to the SWWTF.

The segments of the receiving waters in which the discharges occur have been designated by the Commonwealth of Massachusetts as a Class B water, warm water fishery, and, pursuant to Massachusetts Surface Water Quality Standards have the following uses: habitat for fish, other aquatic life, and wildlife; primary and secondary contact recreation; a source of public water supply (where designated and with appropriate treatment); suitable for irrigation and other agricultural uses and compatible for cooling and process use; and, have consistently good aesthetic value. These segments of the receiving waters are identified in the Massachusetts Surface Water Quality Standards with a CSO designator. The CSO designator for these waters indicates that these waters are impacted by the discharge of combined sewer overflows. Furthermore, the 2014 final Massachusetts Integrated List of Waters lists the specific segments of the Connecticut River where the WWTF discharges and the Connecticut, Mill and Chicopee Rivers where CSO outfalls are located as requiring a TMDL for impairments caused by *E. coli* and fecal coliform.

Response 89

EPA acknowledges the comment.

Comment 89

In light of the descriptions and designations of the receiving waters for these permitted discharges and the listing of segments of the receiving waters into which CSO outfalls discharge as requiring a TMDL for bacterial pollutants associated with CSOs, it is beyond belief that during the past two decades, EPA has not required elimination or at least a reduction in the number of CSO outfalls impacting these waters. The continued permitting of this number of CSO outfalls for another permit term is unconscionable. The number of permitted CSO outfalls should be extremely limited in light of the designated uses of these surface waters.

Response 90

A detailed discussion in Attachment A to this Response to Comments provides the background on the statutory and regulatory framework that applies to combined sewer overflows (CSOs). It briefly describes the Region's approach to key permitting and enforcement issues. EPA's ECAD continues to work with the SWSC towards the elimination and/or reduction in both the number of CSO outfalls and volumes of discharges of untreated wastewater to the Connecticut, Mill and Chicopee Rivers through enforcement actions aimed at achieving compliance with the CWA for CSOs as set forth in NPDES Permit No. MA0101331 (issued to the SWSC in 2009) and in the revised Draft Permit) and

the Permittee's LTCP (which has been incorporated into the 2014 IWP). Specifically, the 2014 IWP recommends capital improvements at the treatment plant and in its collection system. EPA's 2014 Administrative Order requires the implementation of the first three phases of the IWP, which, together, the Commission anticipates will reduce annual CSO activations by 45% and annual CSO volumes by 52%. Phase 1 (conveyance capacity and in-line storage enhancements) was substantially complete in 2014. Phase 2, begun in May 2019, is the York Street Pump Station and river crossing project. Phase 3 addresses additional conveyance and storage capacity.

Comment 90

The inclusion of communities that contribute sanitary wastewater flows to the treatment facility as co-permittees is a welcome modification to this permit, and we believe it will enhance compliance and enforcement of the permit.

Response 91

EPA acknowledges the comment.

Comment 92

Discharges from Springfield add to the nitrogen load in Long Island Sound and contribute to water quality violations in the Sound. On December 23, 2015, the administrators of EPA Regions 1 and 2 issued the Long Island Sound Nitrogen Reduction Strategy (the Nitrogen Strategy) in the form of a letter with attachments addressed to the Environmental Protection Commissioners of the states of New Hampshire, Vermont, Connecticut and New York and the Commonwealth of Massachusetts. The Nitrogen Strategy acknowledges the impact of nitrogen discharged from upstream states has on the Dissolved Oxygen Crisis in Long Island Sound and its impact on water quality standards for the Sound. Incredibly, the Long Island Sound nitrogen TMDL was not considered in the waterbody assessment for the receiving waters. The Clean Water Act grants EPA the authority to require conditions in NPDES permits which ensure compliance with the water quality standards of any other state[50]. Furthermore, in light of the First Circuit Court of Appeal's decision in *Upper Blackstone Water Pollution Abatement District* v. *EPA*, 690 F. 3d 9 (1st Cir. 2012) *cert. denied*, 133 S. Ct. 2382 (2013), EPA has the authority to require permit conditions that comply with water quality standards of downstream states. The impact to Long Island Sound from the nitrogen load from the discharges in this proposed permit must be taken into consideration by EPA.

Response 92

See the General Response, which describes the overall approach EPA has adopted to address TN effluent limitations for out-of-basin POTWs discharging to Long Island Sound.

[50] Clean Water Act § 401, 33 U.S.C. § 1341(a)

Comment 93

The Permit Fact Sheet indicates that in 2004-2005 the SWWTF was meeting the Connecticut Department of Energy and Environmental Protection's TMDL Waste Load Allocation (WLA) 25% aggregate reduction from baseline loadings to the Connecticut River above the Connecticut-Massachusetts border for nitrogen loading from out-of-basin sources. The data shows that SWWTF is no longer meeting that reduction goal. Is this the result of increased development in the area served by the SWWTF?

Response 93

Contrary to the assertion made in the above comment, the aggregate 25% reduction from baseline loadings to the Connecticut River above the Massachusetts-Connecticut border is being met (see Appendix A). While the data do indicate that overall loadings from the SRWTF have increased from 2004-2005, it is difficult to determine the extent to which increased development in the area served by the SRWT may have been a contributing factor.

Comment 94

The proposed new nitrogen loading discussed in the Fact Sheet shifts from a daily load limit for nitrogen to an annual average load limit. Did EPA consider the impact of this change to the Long Island Sound, especially in the months of April through September when hypoxia occurs in the sound?

Response 94

Neither the 2017 Draft Permit nor the revised Draft Permit contained a daily load limit for nitrogen. There has been no change to the Final Permit with respect to the total nitrogen limit being applied as an annual average load limit. EPA observes that TN impacts tend to occur over longer term periods, and certainly longer than one day, as explained in EPA's Nutrient Technical Guidance Manual: Estuarine and Coastal Marine Waters (October 2001, EPA 822-B-01-003). While EPA does not preclude the imposition of a more stringent averaging period if facts in the record warrant it, given the site-specific circumstances of this discharge, EPA has concluded that expression of a TN limit as an annual average load limit is consistent with the TMDL and will be protective of water quality. See General Response.

Comment 95

Since the issuance of the 2000 NPDES permit for Bondi Island and the 2009 of the CSO permit, several studies and reports including, but not limited to, the December 23, 2015 Long Island Sound Nitrogen Reduction Strategy issued by the administrators of EPA Region 1 and Region 2, and the New England Interstate Water Pollution Control Commission ("NEIWPCC") report entitled, "Watershed Synthesis Section: A Preliminary and Qualitative Evaluation of the Adequacy of Current Stormwater and Nonpoint Source Nitrogen Control in Achieving the 2000 Long Island Sound Total Maximum Daily Load for Dissolved Oxygen, August 2014, which clearly demonstrate that the

nitrogen discharges from the wastewater treatment plant, as well as nitrogen from the CSOs, are causing or contributing to water quality violations in Long Island sound and will continue to do so, even if and when all of the remaining actions to implement the 2000 TMDL are taken. Bacteria from CSOs are also causing and contributing to water quality violations in the Connecticut River, both in Massachusetts and in Connecticut. Were the results of these studies and reports considered in preparing these draft permits?

Response 95

EPA did consider these reports. EPA agrees that nitrogen discharges from SWSC contribute to water quality violations in Long Island Sound and have included an effluent limit for nitrogen in the final permit. In addition, EPA agrees that pathogenic bacteria from CSOs contribute to water quality violations in the Connecticut River. The permit does not allow CSO discharges that contribute to water quality violations. Through permit enforcement actions, EPA is ensuring that Springfield and other Massachusetts dischargers continue to reduce CSO discharges through sewer separation and diversion to treatment. From 2010 to 2017, CSO discharges from Western Massachusetts CSOs were reduced from 741 MG/yr to 339 MG/yr and the number of CSO regulators was reduced from 70 to 63.[51] SWSC reduced CSO discharges during that time from 490 to 169 MG/yr and is working to complete additional required (by administrative order) CSO abatement projects by 2023 that will result in further reductions.[52]

Also see response 63.

Comment 96

The draft permit does not contain an enforceable limit for nitrogen. Rather, it proposes continued optimization to meet a benchmark based on the current annual average Total Nitrogen load of 2,279 lbs/day. An enforceable limit must be included in the permit.

Response 96

EPA and DEP withdrew all three of the proposals for nitrogen controls included in the 2017 Draft Permit and replaced them with a new proposal in the revised 2018 Draft Permit for the reasons stated in the Fact Sheet Supplement issued with revised Draft Permit. EPA's approach to permitting out of basin POTWs discharging to Long Island Sound is further described in the General Response at the beginning of this Response to Comments.

Comment 97

Rather than require a nitrogen limit in the permit, EPA invites public comment on three options for addressing nitrogen discharges from the SWWTF. The three options are 1) the TN Optimization Requirement which requires optimization of operations at the facility to meet a benchmark based on

[51] EPA Region 1, *Western Massachusetts Combined Sewer Overflow (CSO) Status*, August 1, 2018, page 2.
[52] Ibid.

the current average TN load of 2,279 lbs/day; 2) the Nitrogen Optimization Benchmark Alternative1 which includes an annual average concentration based optimization benchmark of 8 mg/l combined with a higher annual mass based optimization benchmark of 2,534 lbs/day to provide Springfield with flexibility for growth; and 3) Nitrogen Optimization Benchmark Alternative 2 with an annual average concentration benchmark of 8 mg/l without a specific base load benchmark. The benchmarks in the draft permit and the other two alternatives are not acceptable. A benchmark is not an enforceable limit and, without a numerical limit, enforcement is impossible and there are no consequences for noncompliance. Although we agree that the further review of out-of-basin total nitrogen loads by EPA may require the incorporation of nitrogen limits in future permit modification, nothing prevents EPA from proposing a nitrogen limit now-even the 8 mg/l that EPA believes that Springfield can currently attain-for purposes of enforcement and the fair and equal treatment of the regulated communities that currently operate under such permit limits.

Response 97

See Response 96.

Comment 98

The existing permit for the SWWTF at Bondi Island was issued on December 8, 2000, and was administratively continued by EPA in 2005 without an opportunity for public comment. In light of the passage of more than seventeen years since the issuance of the existing permit, it is imperative that members of the public in Massachusetts and Connecticut impacted by the discharge from the SWWTF have an adequate and reasonable opportunity to voice their concerns about this proposed permit. Therefore, Connecticut Fund for the Environment and its bi-state programs Save the Sound and the Long Island Sound Soundkeeper requests that EPA hold a public hearing on this proposed permit.

Response 98

Due to significant public interest in the 2017 Draft Permit, a public hearing was held on April 24, 2018.

XXI. Testimony Provided by Jack Looney, Staff Attorney, Connecticut Fund for the Environment, April 24, 2018

Comment 99

Good evening. My name is Jack Looney. I'm a staff attorney at Connecticut Fund for the Environment.

Originally, I was going to just rely on my written comments dated February 7, 2018. But, as an attorney representing an environmental advocacy group, certain things I heard tonight raised legal questions in my mind.

Now, under the Clean Water Act, we bring citizen suit actions when government fails to act. And usually, they're for failure to comply with the permit parameter or a limit. But, we have a permit that has benchmarks. And what I heard tonight was that, a violation of the permit would be failure to perform optimization. Well, what's that? How do you enforce that? Again, there's no clear line on enforcement for say a citizen suit.

Also, what troubles me is, an EPA permit should not allow backsliding. Well, where does backsliding fit in when you have a permit that, for the last 20 years, has never had a limit for nitrogen? So, it raises a whole pandora's box of legal issues in my mind as to how the citizens who are impacted by the pollution coming down the Connecticut River into Long Island Sound, how do they take action when the government fails to, when you're dealing with terms that are as vague as the terms in this permit?

Response 99

Subsequent to this testimony, EPA revised the 2017 Draft Permit to include both a requirement to minimize total nitrogen discharges through optimization and a numeric effluent limit. See also the General Response.

XXII. Testimony Provided by Bill Lucey, Soundkeeper of the Save the Sound, April 24, 2018

Comment 100

My name is Bill Lucey, and I'm what's called the Long Island Sound Keeper. I work for Save the Sound. But, I'm also a member of the Water Keeper Alliance which is in 38 countries. I think, there's about 237 keepers now from Iraq to Russia, South America, India. They're all over the world. And our mission is to have swimmable, fishable water for everybody in all rivers and the ocean as well.

I'm a marine sound keeper. So, my job is mostly to patrol Long Island Sound and locate pollution sources. That's why we're concerned with upstream wastewater treatment plant discharges as far away as Canada where the Connecticut River headwaters, including the five states. So, every single one of these wastewater treatment plants is contributing to that load. That's why we're paying attention.

We're a long way from Long Island Sound here. So, I understand some people might wonder why we're here. But, that's the reason. One of our concerns is that this permit is old and hasn't been updated. We heard some discussion about that and updating the TMDL is obviously something that's desired by everyone here involved.

I'm grateful to be able to speak. I don't think anyone's been able to comment on this particular permit since 2000. I may be incorrect with that. But, it's very important for the public. There was a lot of great work outlined by the individuals working at the wastewater treatment plant. And for them to be able to also have a public forum to share that with us is important.

But, the main issue, and I will echo what you just heard is that, guidelines, they're good. But, it's kind of like saying the speed limit's an optional sign, or that stop sign is optional. We don't want to

make the rules too overbearing, too hard to regulate, too expensive. At the same time, there is great value in having a line that everyone agrees on that, if it's not obeyed, we have clean, clear, rapid recourse to fix the issue.

So, why do we care? What's wrong with nitrogen? You put it on your tomatoes and, you know, you get more tomatoes. The Long Island Sound nitrogen reduction strategy we already talked about that. It has created a lot of action. 15 years ago, New York and Connecticut agreed to a 58.5 percent reduction over the course of 15 years in their point source reduction from their sewage treatment plants. We met that last year in year 15.

So, it is possible to put the after burners on and do a better job.

Again, I would like to commend what I heard here tonight, was new to me, the reduced reduction 35 percent from the CSO's that these guys have achieved. I was not aware of that. That's very good news in my opinion and shows good faith effort.

The issue with nitrogen is that it doesn't really affect the river that much when it enters. It's kind of like taking vitamins. You can take a lot of vitamins. If you're eating a well-balanced meal, they're just kind of wasted. So, the total nitrogen goes down the system intact until it hits the marine waters.

And that's where it does the damage. That's where you can get an instant algae bloom. Nitrogen is limiting in Long Island Sound. We have huge algae blooms. You get the salt marshes that are over fertilized. That ends up causing cracks and slumping. We've lost somewhere about 40 percent of our salt water marshes in Long Island Sound, and as well as the loss that nitrogen causes to eel grass beds. We were down 60 to 70 percent in our eel grass bed coverage.

This all has effect on fisheries, crabs, water quality. So, these nitrogen streams are one of the greatest threats we have to Long Island Sound.

And then, where you know the Connecticut River comes in, it creates a big plume. It's a big river. And it goes down the coast. So, it's not just affecting right at the mouth of the Connecticut River. It's going several miles towards New Haven typically, if you look at the circulation models. And so, it's loading up all those areas with nitrogen as well.

And I'd like to give a shout out to Connecticut. We mentioned this. This is something that I think Boston needs to listen to. Springfield has financial troubles. They should be supported by Boston which has substantial financial resources. Western Massachusetts should be allowed to take advantage of a program like Connecticut DEEP has. We've gone from 15 CSO communities down to six.

Massachusetts has 24 CSO communities. And I think they've had those for a long time. I don't know if any have been eliminated. And Connecticut as you know is in fiscal straits compared to its neighbors. Still 2019, on the books for our clean water fund, there is almost a $200,000,000 program just for Hartford to do a CSO project. That's in one fiscal year's allocation.

Granted, we have this grant program. And we just are potentially passing you guys might be interested in this for your own efforts to go to the state legislature that, it's up to 80 percent potentially where you are going to get a grant. So, if you're a low income city, that may be something that allows us to go into places like Bridgeport in Connecticut and fix their CSO problems that are very old as well.

And I like some of the comments I read about doing the modeling, the CSO overflows. I think, you guys are on the right track. You can use your ADCP's or whatever flow modeling technique you're using, get an idea how those CSO's are acting, and then, do a notification program. For the record, Connecticut has a two hour notification requirement.

So, that's the background. And for the record, I'd like to state that we also support a 12 month rolling average of 1,648 pounds of total nitrogen per day loaded to be added to the same table on page 4 in the Draft Permit. And the only reason I agree with that is because it has been demonstrated to be possible in the past. I do not know the technical specifics of that. But, it has been recorded at that level.

So, if it can be done that way, if that's a really good job, we need to keep it there and hopefully, reduce that in the future. As the science gets better, I was really happy to hear that we have monitoring stations, that are actually going to at a real TMDL. It may go up. My guess is it's going to go down. But, we do need to have science informing these decisions.

You don't want to spend a bunch of money on a problem that doesn't exist. At the same time, we need to keep the vision that we're somewhere about 40 times over preindustrial levels of nitrogen in Long Island Sound. We've got a lot of work to do. And every single person that's in the watershed has to play their part.

Response 100

EPA shares the commenters concerns related to the impact that out-of-basin loads in the Connecticut River have on aquatic life uses in Long Island Sound. The optimization-only requirement in the 2017 Draft Permit was revised and reissued for public comments as the 2018 Draft Permit. The 2018 Draft Permit includes a requirement to optimize total nitrogen removal and a numeric effluent limit. See also General Response.

XXIII. Comments Submitted by Bill Lucey, Long Island Soundkeeper, by Letter Dated October 15, 2018

Comment 101

The revised draft permit, unlike the earlier version of this permit issued under Public Notice No. MA-007-18, contains a discharge limitation for Nitrogen, Total of 2,534 lbs/day. We believe this limit is higher than what is achievable. A lesser discharge limitation would be preferable and of greater benefit to our organization and the Soundkeeper in our joint effort to protect the environment and health of Long Island Sound. However, we acknowledge that the limitation in the revised draft permit is a positive first step in controlling the nitrogen load from the Springfield Regional Waste

Water Treatment Facility which negatively impacts the total nitrogen load in Long Island Sound. It is also the first time in almost two decades that EPA has set a nitrogen limit for this facility. We believe that this proposed limitation is an acknowledgement that nitrogen from point sources discharged into the Connecticut River from facilities in Western Massachusetts has an impact on the water quality of a downstream state and on the Long Island Sound.

Response 101

EPA acknowledges the commenter's support of the inclusion of a nitrogen limitation in the Final Permit. As discussed in the General Response, a watershed approach was used to develop the total nitrogen effluent limit for the Final Permit.

Comment 102

The revised draft permit as a Special Condition requires the Springfield Regional Waste Water Treatment Facility to optimize operations relative to total nitrogen removal through ammonia removal, maximization of solids retention, and other operational changes designed to enhance the removal of nitrogen. These special nitrogen conditions in the revised draft permit are also positive steps to reduce the nitrogen load from this facility.

The Connecticut Fund for the Environment and its bi-state programs Save the Sound and the Long Island Sound Soundkeeper support the adoption of this revised draft permit.

Response 102

EPA acknowledges the commenter's support of the Final Permit.

COMMENTS SUBMITTED BY THE MASSACHUSETTS WATER RESOURCES AUTHORITY ("MWRA")

XXIV. Comments Submitted by Michael Hornbrook, Chief Operating Officer, MWRA, by Letter Dated February 12, 2018

Comment 103

Comments on Co-Permittees

MWRA appreciates that the United States Environmental Protection Agency (EPA) has included language that provides some clarity about responsibilities among the co-permittees. However, MWRA continues to have reservations about the inclusion of municipal entities that have not applied for a permit and are not directly discharging to a water of the Commonwealth or the United States. MWRA remains concerned that the co-permittee model is inconsistent with the intent of the Clean Water Act.

Response 103

See Response 1.

Comment 104

Comments on Conventional Pollutant Weekly Load Limits

MWRA believes that in combined sewer systems, like those that exist in Springfield and portions of the MWRA system, where flows can increase dramatically during wet weather, weekly load limits for BOD and TSS should only be applied in wet weather. This is consistent with approaches taken by other states to account for fluctuations in flow due to wet weather, for example:

- Ohio allows mass limits to be calculated using wet weather flow rates if plants are subject to flows that exceed dry weather treatment facility design conditions (OAC 3745-33-05(C)(3)(c)) and

- Indiana allows for tiered effluent limits to allow plants to maximize wet weather flows to the treatment plant (327 IAC5-2-11.4(a)(9) and 327 IAC5-2-11.6(g)(4)).

An extended period of wet weather could result in a violation of a weekly load limit even if a treatment plant meets all daily and weekly concentration limits. An appropriate design flow for weekly conventional pollutant limits based on mass loading could be based on maximum average weekly flows rather than using the annual average flow.

Response 104

As the discharge originates in Massachusetts, EPA has written the permit to comply with Massachusetts Water Quality Standards and those of downstream affected States. Neither Ohio nor Indiana water quality standards are applicable to this proceeding. The BOD_5 and TSS limits that were included in the Draft Permit are based upon the secondary treatment requirements of 40 CFR § 133.102 and 40 CFR §122.45(f). Using a facility's design flow in the derivation of pollutant effluent limitations, including conditions to limit wastewater effluent flow, is consistent with, and anticipated by NPDES permit regulations. Regarding the calculation of effluent limitations for POTWs, 40 CFR § 122.45(b)(1) provides, "permit effluent limitations…shall be calculated based on design flow." POTW permit applications are required to include the design flow of the treatment facility. *Id.* § 122.21(j)(1)(vi). Accordingly, these limits remain unchanged in the Final Permit in order to comply with applicable secondary treatment standards.

Comment 105

Comments on Bypass Language

MWRA supports EPA's Inclusion of bypass language in Springfield's draft NPDES permit. Wastewater treatment plants are designed and constructed with the understanding that, at times, primary-treated-only wastewater will be blended with secondary treated flows and disinfected, provided that the final blended effluent meets secondary permit limits. This practice allows the POTW to maximize flow to the treatment plant from its combined collection system, which may be subject to large fluctuations in flow during wet weather, to minimize combined sewer overflows (CSOs), consistent with EPA policy and regulation.

However, it is unclear why the permit states that a bypass of secondary treatment is subject to the requirements of Part II.B.4.c (prior notice/24-hour reporting). The permit should clarify that Part II.B.4.c applies only when flow bypasses secondary treatment at flows less than the secondary process limit of 134 MGD. Thus, the permit should clarify that, for plant flows greater than 134 MGD that do not cause violations of numerical permit limits or endanger health or the environment, 24-hour reporting of blending is not required.

Response 105

EPA's position concerning footnote 3 and the conditions in the permit that relate to bypasses of secondary treatment are found in Response 2.

Comment 106

Comments on Routine Sampling Schedule (footnote 4)

The draft permit requires that the Permittee establish a routine sampling schedule, and note occasional deviations from the routine sampling program when submitting discharge monitoring reports. These requirements are reasonable and address concerns that sampling be representative of the discharge, as required by 40 CFR 136. The draft permit further requires that any changes to the routine sampling program must be reviewed and approved in writing by EPA and MassDEP. This latter condition is impractical and represents an unnecessary intrusion into the management of the sampling program. Provided the required sampling frequency is met, the permittee should have the flexibility to modify its routine sampling schedule as necessary, due to laboratory staffing and other internal management considerations. A more reasonable requirement would be that the permittee have a documented process for making changes to the sampling program.

Response 106

Although EPA considers the scenarios presented in the above comment regarding situations which may necessitate a change to the sampling program to be "occasional deviations", it is understood that the Permittee may need to make a more lasting change to the routine sampling program. Any modifications to the routine sampling program are to be documented and submitted to EPA and Mass DEP; however, such changes are not contingent upon review and approval by the Agencies. Therefore, the requirement in Footnote 4 to Part I.A.1. of the Draft Permit changes to the routine sampling program must be reviewed and approved in writing by EPA and MassDEP has been removed from the Final Permit.

Comment 107

Comments on Combined Sewer Overflows

The permit should allow flexibility in choosing the most effective way to "characterize CSO impacts and efficacy of CSO controls" (Nine Minimum Controls [NMC] #9), as EPA did in the Public Notification Requirements for Combined Sewer Overflows to the Great Lakes Basin final rule promulgated in the Federal Register on January 8, 2018. MWRA's experience is that due to the

complexity of CSO regulator structures, and the difficulty in maintaining sensors in the harsh environment of a combined sewer, it is usually impossible to accurately measure CSO discharges (i.e., "Duration (hours) of discharge; Volume (gallons) of discharge" for "each combined sewer outfall (pg. 11)) directly. These measurements in the field - as opposed to those at CSO treatment facilities - require extensive, expensive metering at each outfall and regulator. Once the collected meter data are determined (through careful technical assessment) to be valid, the data must then undergo post-processing and expert interpretation, as well as validation against other information such as system performance records and model output, to determine reasonably accurate activation start and stop times and discharge volumes. MWRA has seen that, even with good meter "data", the discharge durations and volumes determined from the data are often suspect or unreliable.

As an alternative to direct measurement, MWRA encourages EPA to also allow modeling, precipitation-based estimates and other analytical tools to estimate CSO discharge duration and volume. Under the right conditions, modeling can be an effective method for determining the occurrence and characteristics of CSOs.

MWRA is providing immediate public notification of CSO discharges at CSO treatment facilities. These facilities are typically the most active CSOs in their respective receiving waters, and can be accurately measured and verified compared to stand alone CSO regulator structures

Initial notification

MWRA understands from the draft permit language that the procedure for public notification of a CSO discharge "within 24 hours of the initiation of any CSO discharge(s)" will be defined in a public notification plan to be submitted by the permittee to EPA and MassDEP. For most outfalls, it is unlikely infeasible to know, within that timeframe, whether there has been an activation. The notification plan should be allowed to include the use of predictions based on forecasts or direct measurement at a surrogate (e.g., most active) outfall location, or other reasonable, broadly applied approach, to notify the public of potential CSO discharges to the receiving water segment.

It is important to keep in mind that notifying the public of CSO discharges into a receiving water body that is affected by many wet weather (and possibly dry weather) sources of pathogens is likely to give the false impression that the water is safe for contact recreation when CSOs are not discharging; or, that the water is safe if there has not been a CSO activation in a storm or a series of wet weather events. The risk to public health is influenced by a number of factors, not just CSO discharges, and should be determined and communicated by the public health authorities, not the permittee.

Follow-up communication

The draft permit requires the permittee to report CSO discharge information for each outfall on its website within 24 hours and in an electronic Discharge Monitoring Report ("DMR") on a monthly basis. MWRA believes it is infeasible to provide accurate information on the timing and volume of each activation within 24 hours at any CSO outfall other than those from CSO treatment facilities, and it is unnecessarily cumbersome to determine and report this information on a monthly basis. Furthermore, MWRA believes that this level of detail is unnecessary to be reported in a short timeframe, or monthly. As discussed above, the permittee should be given adequate time to analyze,

process and validate data (or model results) to report accurate information on activation duration and discharge volume, and that for most outfalls, including outfalls where treatment limits are not imposed, this level of information is not helpful to the public or to CSO control efforts on a more frequent than annual basis.

Response 107

The Final Rule Public Notification for CSOs to the Great Lakes implements Section 425 of the Consolidated Appropriations Act of 2016, which requires EPA to work with the Great Lakes States to establish public notification requirements for combined sewer discharges to the Great Lakes. It does not apply to dischargers outside of the area.

EPA maintains its position that the objective of the monitoring required under the nine minimum controls is to provide data that can be used to evaluate compliance with the technology-based effluent limitations for CSOs that are set forth in the permit (i.e., the nine minimum controls), the efficacy of the CSO controls that have been implemented and to validate the assumptions set forth in the Permittee's LTCP. Therefore, the collection of data through direct measurement is essential for the regulatory agencies to conduct these evaluations. Forms of direct measurement may include, but are not limited to, metering of flows at each CSO outfall. Alternate approaches could include, for example, extrapolating the flow volume discharged through a CSO outfall from measurements of water levels in the interceptor sewers (or some other measured metric of a known quantity from which the flow volume could be derived). The requirement to monitor CSO discharges through direct measurement remains unchanged in the Final Permit.

EPA understands that additional time may be needed to validate and refine CSO data that is collected each month through direct measurement, and as such, the permit requires CSO discharge data to be submitted with the Annual Report that is submitted in accordance with Part I.B.4. of the permit.

EPA agrees that CSO discharge estimates may change between the time the initial and supplemental notifications are provided. This understanding is reflected in Part I.F.3.e.(2) (initial notification) of the Draft Permit, which states that "Initial notification of a probable CSO activation shall be provided…". This language has been maintained in the Final Permit.

EPA's detailed response to concerns regarding the requirement to report CSO data that is collected using meters is found in Response 9.

<u>Initial notification</u>

The public notification requirements in Final Permit (which were proposed in the Revised Draft Permit that was released for public comment on August 18, 2019) allow for the use of modeling estimates of discharge(s) based on rainfall (or other predictive modeling methodologies) rather than on actual CSO discharge measurements in determining whether a *probable* CSO discharge has occurred. See also Response 43.

EPA's response to the commenter's concern for the risk to public health due to factors other than CSO discharges are addressed in Response 42 and Response 111.

Follow-up Communication

EPA disagrees with the commenter's suggestion that confirmation of a CSO discharge can only be made if the discharge is from CSO treatment facilities. The concerns expressed by the commenter regarding the time needed to analyze, process and validate data (or model results) to report accurate information appear to be more appropriately directed towards the collection and reporting of flow volumes, as opposed to confirming whether a CSO discharge occurred.

The intent of the supplemental notification, in conjunction with the initial notification, is to provide the public with timely information relative to CSO discharges so that appropriate precautions can be taken to minimize exposure risks associated with recreating on or near receiving waters into which CSO discharges occur. These public notification requirements are reasonable given the uses of the receiving water and remain unchanged in the Final Permit.

Comment 108

Comments on Total Nitrogen Special Conditions.

Establishment of a Total Maximum Daily Load (TMDL) or a watershed study that establishes clear loading calculations attributable to point and nonpoint sources is a critical component of establishing appropriate effluent limitations. Although development of a TMDL is resource intensive, the process of having public engagement and scientific review is beneficial for the purposes of ensuring that proper goals are set. Proceeding absent such a process could result in requirements for expensive facility upgrades that have minimal environmental improvements. This is especially true for a large inter-state watershed like Long Island Sound.

Response 108

EPA acknowledges the comment and also refers the commenter to the General Response at the beginning of Response to Comments, which describes EPA's approach to permitting out of basin discharges to Long Island Sound, including the legal and technical framework applied to permit the determination. The Draft Permit has been subjected to extensive public process and scrutiny, including a public hearing and extended public comment period.

XXV. Comments Submitted by David Coppes, Chief Operating Officer, MWRA, by Letter Dated October 15, 2018

Comment 109

The revised draft sets a monthly load limit for total nitrogen, in place of a requirement to optimize nitrogen reduction in order to keep loads from increasing beyond present-day levels. In previous comments, MWRA noted that the requirement to limit nitrogen, in the absence of an updated Total

Maximum Daily Load (TMDL), was premature. This is even more critical when a numerical permit limit is imposed. In this instance, it does not appear as though the numerical limit has been established through a scientific and public process. The load limit in the draft permit does not have the weight of a TMDL behind it. In addition, this proposed limit appears to be based on the average flow rather than the design flow as would be required by 40 CFR § 122.45(b)(1).

Therefore, MWRA recommends that the numerical limit be removed from the permit because it is not supported by a TMDL.

Response 109

See the General Response at the beginning of the Response to Comments regarding inclusion of the TN limit. The commenter should note that the effluent limit for total nitrogen is now based on design flow.

Comment 110

Should the final permit retain a load limit for nitrogen, MWRA supports having the limit increase as CSO control projects are completed. This proposed approach recognizes that reducing CSO will reduce nitrogen loads, is consistent with CSO Nine Minimum Controls #5, Maximization of Flow to the POTW for Treatment, and provides an incentive to continue implementation of Springfield's Long Term CSO Control Plan.

However, actual CSO nitrogen load reductions may well be higher than the values assumed in Attachment E of the draft permit, particularly in wet years or if combined sewage nitrogen concentrations are higher than assumed. An allowable TN load increase based on actual CSO flows in a wet year, and TN concentrations based on recent measurements within Springfield's system, would more accurately reflect the true benefit of CSO volume reductions.

Response 110

The commenter appears to be suggesting that the permit limits automatically adjust by operation of the permit as CSO reductions are realized. This dynamic structure will be difficult to administer compared to the more straightforward and predictable approach of simply accounting for the facts and circumstances around TN loading at the time of permit reissuance. This information will be closely evaluated in future permitting actions as well as in determining the overall impacts of complemented CSO abatement projects on effluent quality discharged from the WWTF, and may lead to adjustments in the permit limits, consistent with applicable laws and regulations.

Part I.H.2. of the Final Permit requires the submittal of an annual report evaluating the impact of CSO abatement projects on nitrogen loads discharged from the WWTF. The report must include a comparison of 2012-2016 conditions with conditions for the reporting year with respect to the volume of sanitary sewage and of stormwater discharged through CSOs and through the WWTF. The report must also include the expected change in volume and nitrogen load from the WWTF from sanitary sewage and stormwater flows in connection

with CSO mitigation projects not included in the analysis of conditions as of the report date, but which are expected to be completed within the following five years.

Comment 111

CSOs

The revised draft permit increases, from 90 to 180 days, the time to develop a public notification plan (CSO Nine Minimum Controls #8). This change will allow for a more well-thought-out, workable plan. Because the infrastructure to provide notification needs to be put in place, MWRA recommends that additional time, at least an additional 24 months, be allowed for implementation to put in place the metering and/or modeling necessary to support rapid reporting.

Near-real-time notification

However, the revised draft also reduces the time for initial public notification of CSO discharges from 24 hours to 2 hours. This is a challenging requirement given the difficulty in being able to determine if a discharge has occurred. Furthermore, it is important to keep in mind that in wet weather, even when there are no CSO discharges, receiving water quality is likely impaired by stormwater and other non-CSO sources. A requirement for rapid public notification of CSO discharges may give the erroneous impression that the receiving waters are safe during and immediately after storms in the absence of CSO discharges. More helpful to the public and protective of public health would be a much more general short-term notification of the potential for one or more CSO discharges to a receiving water segment (along with stormwater and other discharges). The risk to public health is best determined and communicated by the public health authorities rather than wastewater permittees. MWRA recommends that the language be changed to provide a general notification that because large storms can trigger CSOs, public health officials recommend avoiding contact with water bodies during rainstorms and for 48 hours afterwards, as there may be increased health risks due to bacteria or other pollutants associated with urban stormwater runoff and CSO discharges.

Notwithstanding our concern about the difficulties and potentially misleading value of the 2-hour notification, we support EPA's inclusion of flexibility in the permit regarding the methods the permittee can use to best identify the occurrence of CSO discharges.

Follow-up notification

The revised draft requires a supplemental notification within 24 hours of the end of a CSO discharge. This supplemental notification would confirm whether the CSO did indeed discharge and provide a measure of the total volume discharged along with the start and stop times. As noted in earlier comments, estimating volume from meter data requires a time-consuming and thorough technical assessment of CSO meter data validity, then post-processing and expert interpretation of said data, to determine activation start and stop times and discharge volumes. Even then, data may be suspect due to the many challenges in monitoring within outfall or regulator structures. A recent

study[53] by the Water Environment Research Foundation found that CSO meter data, although useful for system understanding, is not "reliable enough for automated, real-time use." MWRA's expert consultant requires significantly more time to complete an evaluation of a CSO discharge event. It is not clear what additional value is provided in terms of public health by attempting to estimate CSO volumes within 24 hours. Discharge quantification is useful for assessing progress in CSO control and comparison to limits; it requires a careful, accurate calculation that could be reported a month later, or better yet, annually.

MWRA recommends that the follow-up notification requirement be eliminated.

Annual Notification

Given the above, the CSO activation and volume data are very likely to undergo some corrections between the follow-up notification – especially if it is required within 24 hours – and the annual report. It is not clear in the permit how the permittee is to handle any discrepancies. The permit should make clear that the initial and follow-up notifications are "preliminary – subject to revision" information.

Response 111

The deadline for submitting and implementing the public notification plan required by Part I.B.3.g. of the revised Draft Permit has been extended to 12 and 24 months, respectively, from the effective date of the Final Permit (see Response 42).

With respect to the comment regarding the initial notification requirement in the Revised Draft Permit, as indicated in the Fact Sheet Supplement, the intent of the initial notification is to inform the public of a *probable* CSO discharge occurrence no later than two hours after becoming aware of a *likely* discharge. The supplemental notification shall confirm the occurrence of an actual CSO discharge. (see Response 42).

Although EPA agrees that non-CSO sources may impact water quality in the receiving waters during periods of wet weather and that providing the public with information relevant to stormwater (and other non-CSO sources) impacts would be beneficial, requiring the Permittee to do so would be outside the scope of this permit, which pertains to CSOs and the implementation of the Nine Minimum Controls. EPA does, however, encourage Permittees to provide information relative to the impacts of wet weather, including those due to stormwater and other non-CSO sources, on the quality of the receiving water as well as to public health. The Permittee has communicated to EPA their intention to post a general notice on its website advising the public that large storms can trigger CSO events, and public health officials recommend avoiding contact with waterways during storm events and up to 48 hours afterward, and EPA fully supports these efforts (see Response 42).

[53] http://www.werf.org/c/KnowledgeAreas/ConveyanceSystems/ProductsandLinksnonWERF/NYCDEP_CSO_Metering_Pilot_Study.aspx

EPA acknowledges that additional time than what was proposed in the Revised Draft Permit may be necessary for the post-processing and validation of CSO data that is collection via direct measurement. As such, the requirement in Part I.B.5. to report CSO discharge data with monthly DMRs has been removed from the Final Permit. This information shall instead be included with the Annual Report that is required to be submitted in accordance with Part I.B.4. of the Final Permit.

EPA's response to the comment regarding follow-up notification is found in Response 42.

XXVI. Comments Submitted by Paul Hogan, Woodard and Curran, by Email Dated April 27, 2018

Comment 112

USEPA Region 1 should make the public comments submitted on the draft permit readily available to the public so that the full breadth of the comments can be viewed by those interested in this permit and the larger scope of water quality improvements. The USEPA NPDES web page seems like a logical location to have public access to all comments submitted during the public comment period.

Response 112

All of the comments received on the 2017 Draft Permit and the Revised Draft Permit, as well as the responses to those comments, are part of the administrative record, and as such, are available to the public. In addition, these comments are incorporated into the Response to Comments, which is posted on the EPA Region 1 NPDES website at https://www.epa.gov/npdes-permits/massachusetts-final-individual-npdes-permits upon final issuance of the permit.

Comment 113

The permit (pg. 7) requires a "report" for C-NOEC; however, the permit only has a limit (pg. 4) for acute LC50; the C-NOEC seems not necessary.

Response 113

The table in Footnote 10 of the Draft Permit incorrectly included a reporting requirement for C-NOEC. This requirement has been removed from the Final Permit.

Comment 114

CSO structures/regulators are required to be inspected, at a minimum, once per month- does electronic monitoring (e.g. using SCADA) qualify as an inspection or does one need to physically inspect the facility?

Response 114

Electronic monitoring may be used in conjunction with physical inspections of CSO structures/regulators to ensure that they are in working condition, as required in Part I.B.3.b. of the Draft Permit.

Comment 115

CSO signage and overflow reporting at the SW&SC public web site would seem a logical location for information related to CSOs, particularly in view of the public's tendency to use electronic devices access to information

Response 115

EPA agrees that the SWSC's website would be an appropriate location for the posting of information related to CSOs. EPA encourages the Permittee to consider the use of their website for such purposes as they develop their public notification plan.

Comment 116

Sewer collection system mapping is required (pg. 15); is that information required to be available digitally and will it be accessible to the public?

Response 116

While there is no requirement for making wastewater collection system maps available in a digital format, information that is submitted to EPA in accordance with the Final Permit is a public record and is available for inspection at EPA's Boston office or may be requested by the public.

Comment 117

The collection system O&M plan (pg. 16) is very prescriptive; the SW&SC should be given some flexibility in how it develops and implements its O&M plan as all sewer collection systems are not all exactly the same.

Response 117

EPA recognizes that differences exist between sewer collection systems, and the Draft Permit reflects this understanding. While the required components of the Collection System Operation and Maintenance Plan are set forth in Part I.D.5. of the Final Permit, the specific details of each of these components are to be expanded upon by the Permittee and each of the co-permittees, thus providing them with a reasonable degree of flexibility to tailor, develop and implement their respective O&M plans.

Comment 118

How does USEPA define "optimize" as it related to nitrogen removal ?. Does it mean using existing facility operations (e.g. changing aeration cycles) or does it mean construction of new capital outlays if the proposed annual average mass (2,279 lbs./day) is exceeded? If a benchmark is exceeded, is there a legal remedy to address it? Why is the nitrogen load applied annually and not seasonally as it is done in some other systems (e.g. some Narragansett Bay discharges)? If the SW&SC facility discharges less than the target amount, can it "trade" the difference with another WWTP in the watershed who is addressing nitrogen optimization? If so, what is the mechanism? I suggest that the annual optimization report be made readily available to the public. The nitrogen data in the fact sheet points to the fact that loadings to the Connecticut River in Massachusetts are lower than that required in the TMDL; thus, it does not seem prudent to put a permit limit in the final permit.

Response 118

"Optimize," as it relates to the removal of nitrogen in the context of Final Permit, applies to the operation of existing facilities in such a way so as to maximize nitrogen removal. Although not a permit requirement, capital investment aimed at facilitating nitrogen removal beyond what is achievable with existing facilities may be undertaken as deemed necessary and feasible by the Permittee.

The Draft Permit has been re-proposed to include an enforceable effluent limit for nitrogen.

Since the wasteload allocations are the 2000 LIS TMDL is expressed as an annual load, the limit in the Final Permit is expressed as an annual average load, which is mathematically equivalent to the annual load divided by 365. The rationale behind expressing the load as an annual load was explained in the TMDL as follows:

> While hypoxia generally occurs from June through September, nitrogen loadings throughout the year contribute to the pool of nitrogen available for uptake by phytoplankton. The model did not show a strong relationship between hypoxia and the seasonality of nitrogen loads to Long Island Sound that would warrant special attention to seasonal management of nitrogen. This is because algal growth occurs over seasonal and annual cycles where the total pool of nitrogen available is the critical factor. This supports the use of a maximum annual load used in this TMDL, rather than seasonal or daily load limits.[54]

In EPA's judgment, the continued use of an annual load, and collection of year-round data necessary to track it, provides the consistency necessary for regulators across the five states, two EPA regions and many stakeholders to use comparable units of loading when analyzing loading trends and managing the implementation of strategies to restore Long Island Sound.

EPA fully supports and encourages discussions between the regulatory agencies, the regulated community, and other affected parties regarding the development of a nitrogen trading program either through the implementation of this permit or future permits. Although

[54] LIS TMDL (page 19)

EPA is not in a position to administer such a program, it anticipates taking an active role in facilitating the development of a trading program were the various stakeholders interested in initiating one. See also response 50.

All reports submitted in accordance with the Final Permit are available for inspection by the public at EPA's Boston office or may be requested by the public.

Also see General Response.