AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act as amended, 33 U.S.C. §§ 1251 et seq. (the "CWA"),

City of Holyoke
Department of Public Works

is authorized to discharge from the facility located at

Holyoke Water Pollution Control Facility
1 Berkshire Street
Holyoke, Massachusetts 01040

And

Combined Sewer Overflow (CSO) discharges at 10 locations

to receiving water named

Connecticut River (Segment MA34-05) – WPCF and CSOs # 002, 007, 008, 009 and 016
Connecticut River (Segment MA34-04) – CSOs # 018, 019, 020, 021, 021 and 020
Connecticut River Watershed

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the first day of the calendar month immediately following 60 days after signature. [1]

This permit expires at midnight, five years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on October 25, 2016.

[1] Procedures for appealing EPA's Final Permit decision may be found at 40 CFR § 124.19.

This permit consists of **Part I** including the cover page(s), **Attachment A** (Freshwater Acute Toxicity Test Procedure and Protocol, February 2011), **Attachment B** (Reassessment of Technically Based Industrial Discharge Limits), **Attachment C** (NPDES Permit Requirement for Industrial Pretreatment Annual Report); **Attachment D** (PFAS Analyte List) and **Part II** (NPDES Part II Standard Conditions, April 2018).

Signed this day of

KENNETH MORAFF Digitally signed by KENNETH MORAFF Date: 2024.01.25 16:25:37 -05'00'

Ken Moraff, Director
Water Division
Environmental Protection Agency
Region 1
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated effluent through Outfall Serial Number 001 to the Connecticut River. The discharge shall be limited and monitored as specified below; the receiving water and the influent shall be monitored as specified below.

Effluent Characteristic	Effluent Limitation			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Rolling Average Effluent Flow[5]	17.5 MGD[5]	---	---	Continuous	Recorder
Effluent Flow[5]	Report MGD	---	Report MGD	Continuous	Recorder
BOD_5	30 mg/L 4,379 lb/day	45 mg/L	Report mg/L	5/Week	Composite
BOD_5 Removal	≥ 85 %	---	---	1/Month	Calculation
TSS	30 mg/L 4,379 lb/day	45 mg/L	Report mg/L	5/Week	Composite
TSS Removal	≥ 85 %	---	---	1/Month	Calculation
pH Range[6]	6.0 - 8.3 S.U.			1/Day	Grab
Total Residual Chlorine[7,8]	0.74 mg/L	---	1.0 mg/L	3/Day	Grab
Escherichia coli[7,8] (April 1 – October 31)	126 cfu/100 mL	---	409 cfu/100 mL	2/Week	Grab
Total Aluminum	87 µg/L	---	Report	1/Month	Composite
Total Copper	21.6 µg/L	---	25.1 µg/L	1/Month	Composite
Total Lead	1.6 µg/L	---	Report	1/Month	Composite
Total Kjeldahl Nitrogen[9]	Report mg/L	---	Report mg/L	1/Week	Composite
Nitrate + Nitrite[9]	Report mg/L	---	Report mg/L	1/Week	Composite
Total Nitrogen[9]	Report mg/L Report lb/day	---	Report mg/L	1/Month	Calculation
Rolling Average Total Nitrogen[10]	730 lb/day	---	---	1/Month	Calculation
PFAS Analytes[11]	---	---	Report ng/L	1/Quarter	Grab
Adsorbable Organic Fluorine[12]	---	---	Report ng/L	1/Quarter	Grab

Effluent Characteristic	Effluent Limitation			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Whole Effluent Toxicity (WET) Testing[13,14]					
LC_{50}	---	---	≥ 100 %	1/Quarter	Composite
Hardness	---	---	Report mg/L	1/Quarter	Composite
Ammonia Nitrogen	---	---	Report mg/L	1/Quarter	Composite
Total Aluminum	---	---	Report mg/L	1/Quarter	Composite
Total Cadmium	---	---	Report mg/L	1/Quarter	Composite
Total Copper	---	---	Report mg/L	1/Quarter	Composite
Total Nickel	---	---	Report mg/L	1/Quarter	Composite
Total Lead	---	---	Report mg/L	1/Quarter	Composite
Total Zinc	---	---	Report mg/L	1/Quarter	Composite
Total Organic Carbon	---	---	Report mg/L	1/Quarter	Composite

Ambient Characteristic[15]	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Hardness	---	---	Report mg/L	1/Quarter	Grab
Ammonia Nitrogen	---	---	Report mg/L	1/Quarter	Grab
Total Aluminum	---	---	Report mg/L	1/Quarter	Grab
Total Cadmium	---	---	Report mg/L	1/Quarter	Grab
Total Copper	---	---	Report mg/L	1/Quarter	Grab
Total Nickel	---	---	Report mg/L	1/Quarter	Grab
Total Lead	---	---	Report mg/L	1/Quarter	Grab
Total Zinc	---	---	Report mg/L	1/Quarter	Grab
Total Organic Carbon	---	---	Report mg/L	1/Quarter	Grab
Dissolved Organic Carbon[16]	---	---	Report mg/L	1/Quarter	Grab
pH[17]	---	---	Report S.U.	1/Quarter	Grab
Temperature[17]	---	---	Report °C	1/Quarter	Grab

Influent Characteristic	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
BOD_5	Report mg/L	---	---	2/Month	Composite
TSS	Report mg/L	---	---	2/Month	Composite
PFAS Analytes[11]	---	---	Report ng/L	1/Quarter	Grab
Adsorbable Organic Fluorine[12]	---	---	Report ng/L	1/Quarter	Grab

Sludge Characteristic	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
PFAS Analytes[11]	---	---	Report ng/g	1/Quarter	Grab[18]

*For additional monitoring and reporting requirements related to CSOs, see Parts I.H.5 and I.H.6 below.

Footnotes:

1. All samples shall be collected in a manner to yield representative data. 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 as an electronic attachment to the applicable discharge monitoring report. The Permittee shall report the results to the Environmental Protection Agency Region 1 (EPA) and MassDEP (the "State") of any additional testing above that required herein, if testing is in accordance with 40 CFR Part 136.

2. In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers either to the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in the following ways: they may be published in a method; they may be based on 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 laboratory, by a factor.

3. When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the ML for that parameter (e.g., < 50 µg/L, if the ML for a parameter is 50 µg/L). For reporting an average based on a mix of values detected and not detected, assign a value of "0" to all non-detects for that reporting period and report the average of all the results.

4. A "grab" sample is an individual sample collected in a period of less than 15 minutes.

   A "composite" sample is a composite 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 proportional to flow.

5. The limit is a rolling annual average, reported in million gallons per day (MGD), which will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the previous eleven months. Also report monthly average and maximum daily flow in MGD.

6. The pH shall be within the specified range at all times. The minimum and maximum pH sample measurement values for the month shall be reported in standard units (S.U.). For NH: See Part I.G.1 below for a provision to modify the pH range.

   If the Permittee wishes to continue the lower pH range to 6.0 S.U. for future permit cycles, they must conduct a pH study and submit the results of said study to MassDEP at massdep.npdes@mass.gov within three years of the effective date of the authorization to discharge under this permit. For guidance on the study, the Permittee shall contact MassDEP at massdep.npdes@mass.gov.

7. The Permittee shall minimize the use of chlorine while maintaining adequate bacterial control. Monitoring for total residual chlorine (TRC) is only required for discharges which have been previously chlorinated or which contain residual chlorine. If chlorine is not utilized during a particular monitoring period, TRC monitoring is not necessary and the Permittee may enter "NODI" code 9 (i.e., conditional monitoring) in the relevant discharge monitoring report.

   Chlorination and dechlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection, or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem, and the estimated amount of time that the reduced levels of chlorine or dechlorination chemicals occurred.

8. The monthly average limit for *Escherichia coli* (*E. coli*) is expressed as a geometric mean. *E. coli* monitoring shall be conducted concurrently with TRC monitoring, if TRC monitoring is required.

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

   Total Nitrogen (mg/L) = Total Kjeldahl Nitrogen (mg/L) + Nitrate + Nitrite (mg/L)

   Total Nitrogen (lb/day) = [(average monthly Total Nitrogen (mg/L) * total monthly effluent flow (Millions of Gallons (MG)) / # of days in the month] * 8.34

10. The rolling annual 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 for the previous 11 months. Report both the rolling annual average and the monthly average each month.

    See Part I.G.1 for special conditions related to nitrogen.

11. Report in nanograms per liter (ng/L) for effluent and influent samples; report nanograms per gram (ng/g) for sludge samples. Until there is an analytical method approved in 40 CFR Part 136 for PFAS, monitoring shall be conducted using Method 1633. Report in NetDMR the results of all PFAS analytes required to be tested in Method 1633, as shown in Attachment D. This reporting requirement for the listed PFAS parameters takes effect the first full calendar quarter following six months after the effective date of the permit.

12. Report in nanograms per liter (ng/L) for effluent and influent samples. Until there is an analytical method approved in 40 CFR Part 136 for Adsorbable Organic Fluorine, monitoring shall be conducted using Method 1621. This reporting requirement takes effect the first full calendar quarter following six months after EPA notifies the Permittee that Method 1621 has been multi-lab validated.

13. The Permittee shall conduct acute toxicity tests (LC50) in accordance with test procedures and protocols specified in Attachment A of this permit. LC50 and C-NOEC are defined in Part II.E. of this permit. The Permittee shall test the daphnid, *Ceriodaphnia dubia*. Toxicity test samples shall be collected during the same weeks each time of calendar quarters ending March 31st, June 30th, September 30th, and

December 31st. The complete report for each toxicity test shall be submitted as an attachment to the DMR submittal which includes the results for that toxicity test.

14. For Part I.A.1., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the receiving water to be toxic or unreliable, the Permittee shall follow procedures outlined in **Attachment A**, Section IV., DILUTION WATER. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

15. For Part I.A.1., Ambient Characteristic, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the receiving water sample collected as part of the WET testing requirements. Such samples shall be taken from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location, as specified in **Attachment A**. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.

16. Monitoring and reporting for dissolved organic carbon (DOC) are not requirements of the Whole Effluent Toxicity (WET) tests but are additional requirements. The Permittee may analyze the WET samples for DOC or may collect separate samples for DOC concurrently with WET sampling.

17. A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols.

18. Sludge sampling shall be as representative as possible based on guidance found at https://www.epa.gov/sites/production/files/2018-11/documents/potw-sludge-sampling-guidance-document.pdf.

2. The discharge shall not cause a violation of the water quality standards of the receiving water.

3. The discharge shall be free from pollutants in concentrations or combinations that, in the receiving water, settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.

4. The discharge shall be free from pollutants in concentrations or combinations that adversely affect the physical, chemical, or biological nature of the bottom.

5. The discharge shall not result in pollutants in concentrations or combinations in the receiving water that are toxic to humans, aquatic life or wildlife.

6. The discharge shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to the receiving water.

7. The discharge shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

8. The Permittee must provide adequate notice to EPA-Region 1 and the State of the following:

   a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Part 301 or Part 306 of the Clean Water Act if it were directly discharging those pollutants or in a primary industry category (see 40 CFR Part 122 Appendix A as amended) discharging process water; and

   b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

   c. For purposes of this paragraph, adequate notice shall include information on:

      (1) The quantity and quality of effluent introduced into the POTW; and

      (2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

9. Pollutants introduced into the POTW by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.

10. In accordance with 40 CFR § 122.44(j)(1) the Permittee must identify, in terms of character and volume, any Significant Industrial Users (SIUs) discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR Part 403. SIUs information shall be updated at a minimum of once per year or at that frequency necessary to ensure that all SIUs are properly permitted and/or controlled. The records shall be maintained and updated as necessary.

B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall listed in Part I.A.1 and ten combined sewer overflow outfalls (CSOs) listed in Part I.H.1 in accordance with the terms and conditions of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs), are not authorized by this permit. The Permittee must provide verbal notification to EPA within 24 hours of becoming aware of any unauthorized discharge and a report within 5 days, in accordance with Part II.D.1.e (24-hour reporting). Providing that it contains the information required in Part II.D.1.e, submission of the MassDEP SSO Reporting Form (described in Part I.B.3 below) may satisfy the requirement for a written report. See Part I.I below for reporting requirements.

2. The Permittee must provide notification to the public on a publicly available website within 24 hours of becoming aware of any of the following unauthorized discharges: (a) any discharge of partially treated wastewater, including blended wastewater; (b) any Sanitary Sewer Overflow that discharges through a wastewater outfall, either directly or indirectly, to a surface water of the Commonwealth; (c) any SSO that flows into a surface water of the Commonwealth and is the result of the sanitary sewer system surcharging under high flow conditions when peak flows cannot be conveyed to a POTW due to capacity constraints; and (d) any SSO that flows into a surface water of the Commonwealth and is the result of a failure of a wastewater pump station or associated force main designed to convey peak flows of one million gallons per day or greater. Such notification shall include the location and description of the discharge; the approximate dates and times the discharge or overflow began, and its duration; and the estimated volume. Fulfilling these requirements does not relieve the Permittee of the responsibility of complying with 314 CMR 16.00.

3. Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes MassDEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at https://www.mass.gov/how-to/sanitary-sewer-overflowbypassbackup-notification. Notification to MassDEP and EPA shall not release the Permittee from the MassDEP public notification requirements of 314 CMR 16.00.

C. OPERATION AND MAINTENANCE OF THE TREATMENT AND CONTROL FACILITIES

1. Adaptation Planning

   a. *Adaptation Plan*. Within the timeframes described below, the Permittee shall develop an Adaptation Plan for the Wastewater Treatment System (WWTS) [2] and/or sewer system[3] that they own and operate. Additional information on the procedures and resources to aid permittees in development of the Adaptation Plan is provided on EPA's Region 1 NPDES website at https://www.epa.gov/npdes-permits/npdes-water-permit-program-new-england. The Adaptation Plan shall contain sufficient detail for EPA to evaluate the analyses.

      Component 1: Identification of Vulnerable Critical Assets. Within 24 months of the effective date of the permit, the Permittee shall develop and sign, consistent with the signatory

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2 "Wastewater Treatment System" or "WWTS" means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It does not include sewers, pipes and other conveyances to the wastewater treatment facility.

3 "Sewer System" refers to the sewers, pump stations, manholes and other infrastructure use to convey sewage to the wastewater treatment facility from homes or other sources.

requirements in Part II.D.2 of this Permit, an identification of critical assets[4] and related operations[5] within the WWTS and/or sewer system which they own and operate, as applicable, that are most vulnerable due to major storm and flood events[6] under baseline conditions[7] and under future conditions.[8] This information shall be provided to EPA upon request. For these critical assets and related operations, the Permittee shall assess the ability of each to function properly in the event of impacts[9] from major storm and flood events in terms of effluent flow (e.g., bypass, upset or failure), sewer flow (e.g., overflow, inflow and infiltration), and discharges of pollutants (e.g., effluent limit exceedance).

Component 2: Adaptative Measures Assessment.[10] Within 36 months of the effective date of the permit, the Permittee shall develop and sign, consistent with the signatory requirements in Part II.D.2 of this Permit, an assessment of adaptive measures,[11] and/or, if appropriate, the combinations of adaptative measures that minimize the impact of future conditions on the critical assets and related operations of the WWTS and/or sewer system(s). This information shall be provided to EPA upon request. The Permittee shall identify the critical assets and related operations at the highest risk of not functioning properly under such conditions and, for those, select the most effective adaptation measures that will ensure proper operation of the highest risk critical assets and the system as a whole.

Component 3: Implementation and Maintenance Schedule. Within 48 months of the effective date of the permit, the Permittee shall submit to EPA a proposed schedule for implementation and maintenance of adaptive measures. The Implementation and Maintenance Schedule shall

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4 A "critical asset" is an asset necessary to ensure the safe and continued operation of the WWTS or the sewer system and ensure the forward flow and treatment of wastewater in accordance with the limits set forth in this permit.

5 "Asset related operations" are elements of an asset that enable that asset to function. For example, pumps and power supply enable the operation of a pump station.

6 "Major storm and flood events" refer to instances resulting from major storms such as hurricanes, extreme/heavy precipitation events, and pluvial, fluvial, and flash flood events such as high-water events, storm surge, and high-tide flooding, including flooding caused by sea level change. "Extreme/heavy precipitation" refers to instances during which the amount of rain or snow experienced in a location substantially exceeds what is normal according to location and season.

7 "Baseline conditions" refers to the 100-year flood based on historical records.

8 "Future conditions" refers to projected flood elevations using one of two approaches: a) Climate Informed Science Approach (CISA): The elevation and flood hazard area that result from using the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. These shall include both short term (10-25 years forward-looking) and long term (25-70 years forward-looking) relative to the baseline conditions and must include projections of flooding due to major storm and flood events using federal, state and local data, where available; b) Freeboard Value and 500-year floodplain Approach: The flood elevations that result from adding an additional 2 feet to the 100-year flood elevation for non-critical actions and by adding an additional 3 feet to the 100-year flood elevation for critical actions compared to the flood elevations that result from 500-year flood (the 0.2% -annual-chance flood) and selecting the higher of the two flood elevations.

9 "Impacts" refers to a strong effect on an asset and/or asset-related operation that may include destruction, damage or ineffective operation of the asset and/or asset operation. Impacts may be economic, environmental, or public health related.

10 The Permittee may complete this component using EPA's Climate Resilience Evaluation and Awareness Tool (CREAT) Risk Assessment Application for Water Utilities, found on EPA's website Creating Resilient Water Utilities (CRWU) (https://www.epa.gov/crwu), or methodology that provides comparable analysis.

11 "Adaptive Measures" refers to physical infrastructure or actions and strategies that a utility can use to protect their assets and mitigate the impacts of threats. They may include but are not limited to: building or modifying infrastructure, utilization of models (including but not limited to: flood, sea-level rise and storm surge, sewer/collection system, system performance), monitoring and inspecting (including but not limited to: flood control, infrastructure, treatment) and repair/retrofit.

summarize the general types of significant risks[12] identified in Component 1, including the methodology and data used to derive future conditions[13] used in the analysis and describe the adaptive measures taken (or planned) to minimize those risks from the impact of major storm and flood events for each of the critical assets and related operations of the WWTS and the sewer system and how those adaptive measures will be maintained, including the rationale for either implementing or not implementing each adaptive measure that was assessed and an evaluation of how each adaptive measure taken (or planned) will be funded.

b. *Credit for Prior Assessment(s) Completed by Permittee.* If the Permittee has undertaken assessment(s) that were completed within 5 years of the effective date of this permit, or is [are] currently undertaking an assessment that address some or all of the Adaptation Plan components, such prior assessment(s) undertaken by the Permittee be used (as long as the reporting time frames (set forth in Part I.C.1.a) and the signatory requirements (set forth in Part II.D.2 of this permit) are met) in satisfaction of some or all of these components, as long as the Permittee explains how its prior assessments specifically meet the requirements set forth in this permit and how the Permittee address any permit requirements that have not been addressed in its prior or ongoing assessment(s).

c. *Adaptation Plan Progress Report.* The Permittee shall submit an Adaptation Plan Progress Report on the Adaptation Plan for the prior calendar year that documents progress made toward completing the Adaptation Plan and, following its completion, any progress made toward implementation of adaptive measures, and any changes to the WWTF or other assets that may impact the current risk assessment. The first Adaptation Progress Report is due the first March 31 following completion of the Identification of Critical Vulnerable Assets (*Component 1*) and shall be included with the annual report required in Part I.C.3 below each year thereafter. The Adaptation Plan shall be revised if on- or off-site structures are added, removed, or otherwise significantly changed in any way that will impact the vulnerability of the WWTS or sewer system.

Odd that the final permit didn't contain a similar reference for WWTF operations

2. Sewer System

Operation and maintenance (O&M) of the sewer system shall be in compliance with 40 CFR § 122.41 (d) and (e) and the terms and conditions of the Part II Standard Conditions, B. Operation and Maintenance of Pollution Controls which is attached to this Permit. The Permittee shall complete the following activities for the collection system which it owns:

a. Maintenance Staff

The Permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. Provisions to meet this requirement shall be described in the Sewer System O&M Plan required pursuant to Part I.C.2.e. below.

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12 In light of security concerns posed by the public release of information regarding vulnerabilities to wastewater infrastructure, the Permittee shall provide information only at a level of generality that indicates the overall nature of the vulnerability but omitting specific information regarding such vulnerability that could pose a security risk.
13 See footnote 8.

b. Preventive Maintenance Program

The Permittee shall maintain an ongoing preventive maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges. Plans and programs to meet this requirement shall be described in the Sewer System O&M Plan required pursuant to Part I.C.2.e. below.

c. Infiltration/Inflow

The Permittee shall control infiltration and inflow (I/I) into the sewer system as necessary to prevent high flow related unauthorized discharges from their collection systems and high flow related violations of the wastewater treatment plant's effluent limitations. Plans and programs to control I/I shall be described in the Sewer System O&M Plan required pursuant to Part I.C.2.e. below.

d. Sewer System Mapping

The Permittee shall maintain a map of the sewer collection system it owns. The map shall be on a street basemap of the community, with sufficient detail and at a scale to allow easy interpretation. The sewer system information shown on the map shall be based on current conditions and shall be kept up-to-date. If any items listed below, such as the location of all outfalls, are not fully documented, the Permittee must clearly identify each component of the dataset that is incomplete, as well as the date of the last update of the mapping product. Such map(s) shall include, but not be limited to the following:

(1) All sanitary sewer lines and related manholes;

(2) All combined sewer lines, related manholes, and catch basins;

(3) All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain systems (e.g. combination manholes);

(4) All outfalls, including the treatment plant outfall(s), CSOs, and any known or suspected SSOs, including stormwater outfalls that are connected to combination manholes;

(5) All pump stations and force mains;

(6) The wastewater treatment facility(ies);

(7) All surface waters (labeled);

(8) Other major appurtenances such as inverted siphons and air release valves;

(9) A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;

(10) The scale and a north arrow; and

(11) The pipe diameter, date of installation, type of material, distance between manholes, and the

direction of flow.

e. Sewer System Operation and Maintenance Plan

The Permittee shall develop and implement a *Sewer System Operation and Maintenance Plan* for the portion of the system it owns.

(1) Within six (6) months of the effective date of the permit, the Permittee shall submit to EPA and the State:

i. A description of the collection system management goals, staffing, information management, and legal authorities;

ii. A description of the collection system and the overall condition of the collection system including a list of all pump stations and a description of recent studies and construction activities; and

iii. A schedule for the development and implementation of the full *Sewer System Operation and Maintenance Plan* including the elements in Parts I.C.2.e.(2)(i) through (2)(viii) below.

(2) The full Sewer System O&M Plan shall be completed, implemented and submitted to EPA and the State within twenty-four (24) months from the effective date of this permit. The Plan shall include:

i. The required submittal from Part I.C.2.e.(1) above, updated to reflect current information;

ii. A preventive maintenance and monitoring program for the collection system;

iii. Description of sufficient staffing necessary to properly operate and maintain the sanitary sewer collection system and how the operation and maintenance program is staffed;

iv. Description of funding, the source(s) of funding and provisions for funding sufficient for implementing the plan;

v. Identification of known and suspected overflows and back-ups, including manholes. A description of the cause of the identified overflows and back-ups, corrective actions taken, and a plan for addressing the overflows and back-ups consistent with the requirements of this permit;

vi. 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;

vii. An educational public outreach program for all aspects of I/I control, particularly private

inflow; and

viii. An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the permit.

3. Annual Reporting Requirement

The Permittee shall submit a summary report of activities related to the implementation of its O&M Plans during the previous calendar year. The report shall be submitted to EPA and the State annually by March 31. The first annual report is due the first March 31 following submittal of the Sewer System O&M Plan required by Part I.C.2.e.(2) of this permit. The summary report shall, at a minimum, include:

a. A description of the staffing levels maintained during the year;

b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year;

c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year;

d. A map with areas identified for investigation/action in the coming year;

e. A summary of unauthorized discharges during the past year and their causes and a report of any corrective actions taken as a result of the unauthorized discharges reported pursuant to the Unauthorized Discharges section of this permit;

f. If the average annual flow in the previous calendar year exceeded 80 percent of the facility's 17.5 MGD design flow (14 MGD), or there have been capacity related overflows, the report shall include:

(1) Plans for further potential flow increases describing how the Permittee will maintain compliance with the flow limit and all other effluent limitations and conditions; and

(2) A calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year.

g. The Adaptation Plan Progress Report described in Part I.C.1.c above.

D. ALTERNATE POWER SOURCE

In order to maintain compliance with the terms and conditions of this permit, the Permittee shall provide an alternative power source(s) sufficient to operate the portion of the publicly owned treatment works it owns and operates, as defined in Part II.E.1 of this permit.

E. INDUSTRIAL USERS AND PRETREATMENT PROGRAM

1. Legal Authority

The Permittee has been delegated primary responsibility for enforcing against discharges prohibited by 40 CFR 403.5 and applying and enforcing any national Pretreatment Standards established by the United States

Environmental Protection Agency in accordance with Section 307 (b) and (c) of The Clean Water Act (Act), as amended by The Water Quality Act (WQA), of 1987.

The Permittee shall operate an industrial pretreatment program in accordance with the General Pretreatment Regulations found in 40 CFR Part 403 and the approved pretreatment program submitted by the Permittee. The pretreatment program was approved on July 22, 1985 and has subsequently incorporated substantial modifications as approved by EPA. The approved pretreatment program, and any approved modifications thereto, is hereby incorporated by reference and shall be implemented in a manner consistent with the following procedures, as required by 40 CFR Part 403.

The Permittee must have or develop a legally enforceable municipal code or rules and regulations to authorize or enable the POTW to apply and enforce the requirements of Sections 307(b) and (c) and 402(b)(8) and (9) of the Act and comply with the requirements of § 403.8(f)(1). At a minimum, this legal authority shall enable the POTW to:

a. Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by Industrial Users where such contributions do not meet applicable Pretreatment Standards and Requirements or where such contributions would cause the POTW to violate its NPDES permit;

b. Require compliance with applicable Pretreatment Standards and Requirements by Industrial Users;

c. Control through Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users this control shall be achieved through permits or equivalent control mechanism identified as significant under § 403.3(v), as required by § 403.8(f)(1)(iii);

d. Require (a) the development of a compliance schedule by each Industrial User for the installation of technology required to meet applicable Pretreatment Standards and Requirements and (b) the submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance by Industrial Users with Pretreatment Standards and Requirements, including but not limited to the reports required in § 403.12;

e. Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP, but in no case less than once per year, and with adequate maintenance of records, Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under § 403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;

f. Obtain remedies for noncompliance by any Industrial User with any Pretreatment Standard and Requirement. All POTW's shall be able to seek injunctive relief for noncompliance by Industrial Users with Pretreatment Standards and Requirements. All POTWs shall also have authority to seek or assess civil or criminal penalties in at least the amount of $1,000 a day for each violation

by Industrial Users of Pretreatment Standards and Requirements in accordance with § 403.8(f)(1)(vii)(A); and

g. Comply with the confidentiality requirements set forth in § 403.14.

2. Implementation Requirements

The Permittee shall operate a pretreatment program in accordance with the General Pretreatment Regulations found in 40 CFR Part 403 and with the legal authorities, policies, procedures, and financial provisions of the approved Pretreatment program submitted by the Permittee. The approved Pretreatment program, and any approved modifications thereto, is hereby incorporated by reference and shall be implemented in a manner consistent with the following procedures, as required by 40 CFR Part 403:

a. In accordance with 40 CFR § 122.44(j)(1), Identify, in terms of character and volume of pollutants contributed from Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR Part 403.

b. The Permittee must notify these identified Industrial Users of applicable Pretreatment Standards and any applicable requirements in accordance with 40 CFR § 403.8(f)(2)(iii). Pursuant to 40 CFR § 403.8(f)(6), prepare and maintain a list of significant industrial users and identify the criteria in 40 CFR § 403.3(v)(1) applicable to each industrial user.

c. The Permittee must carry out inspection procedures and randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in accordance with 40 CFR § 403.8(f)(2)(v), which will determine independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.

d. The Permittee shall receive and analyze self-monitoring reports and other notices submitted by Industrial Users in accordance with the self-monitoring requirements in 40 CFR § 403.12; This must include timely and appropriate reviews of industrial user reports and notifications to identify all violations of the user's permit, the local ordinance, and federal pretreatment standards and requirements.

e. The Permittee shall evaluate whether each SIU needs a plan to control Slug Discharges in accordance with 40 CFR § 403.8(f)(2)(vi). SIUs must be evaluated within 1 year of being designated an SIU. If required, the Permittee shall require the SIU to prepare or update, and implement a slug prevention plan that contains at least the minimum required elements in 40 CFR § 403.8(f)(2)(vi)(A-D) and incorporate the slug control requirements into the SIU's control mechanism;

f. Pursuant to 40 CFR § 403.8(f)(2)(vii), the Permittee shall investigate instances of non-compliance with Pretreatment Standards and requirements indicated in required reports and notices or indicated by analysis, inspection, and surveillance activities.

g. The Permittee shall publish, at least annually, in a newspaper or newspapers of general circulation that provides meaningful public notice within the jurisdiction(s) served by the

POTW, a list of all non-domestic users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR § 403.8 (f)(2)(viii).

h. The Permittee shall provide sufficient resources and qualified personnel to implement its Pretreatment program in accordance with 40 CFR § 403.8(f)(3);

i. The Permittee shall enforce all applicable Pretreatment Standards and requirements and obtain remedies for noncompliance by any industrial user. The Permittee shall develop, implement, and maintain an enforcement response plan in accordance with 40 CFR § 403.8(f)(5); and

j. Pursuant to 40 CFR § 403.8(g), the Permittee that chooses to receive electronic documents must satisfy the requirements of 40 CFR Part 3 – (Electronic reporting).

3. Local Limit Development

a. The Permittee shall develop, continually maintain, and enforce, as necessary, local limits to implement the general and specific prohibitions in 40 CFR § 403.5(c)(1) which prohibit the introduction of any pollutant(s) which cause pass through or interference and the introduction of specific pollutants to the waste treatment system from any source of non-domestic discharge.

b. The Permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond. Within 90 days of the effective date of the permit, the Permittee shall prepare and submit a written technical evaluation to EPA analyzing the need to revise local limits. As part of this evaluation, the Permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the Permittee shall complete and submit the attached form (see Attachment B – Reassessment of Technically Based Industrial Discharge Limits) with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. 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. The Permittee shall carry out the local limits revisions in accordance with EPA's Local Limit Development Guidance (July 2004).

4. Notification Requirements

a. The Permittee must notify EPA of any new introductions or any substantial change in pollutants from any Industrial User within sixty (60) days following the introduction or change, as required in 40 CFR 122.42(b)(1-3). Such notice must identify:

(1) Any new introduction of pollutants from an Industrial User which would be subject to Sections 301, 306, and 307 of the Act if it were directly discharging those pollutants; or

(2) Any substantial change in the volume or character of pollutants being discharged by any

Industrial User;

(3) For the purposes of this section, adequate notice shall include information on:

i. The identity of the Industrial User;
ii. The nature and concentration of pollutants in the discharge and the average and maximum flow of the discharge; and
iii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from or biosolids produced at such POTW.

b. The Permittee must notify EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR § 122.29 (b);

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged; or

(3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices.

c. The Permittee must notify EPA if the POTW modifies or intends to modify its Pretreatment Program.

d. The Permittee must notify EPA of any instance of pass through or interference, known or suspected to be related to a discharge from an Industrial User. The notification shall be attached to the DMR submitted EPA and shall describe the incident, including the date, time, length, cause, and the steps taken by the Permittee and Industrial User to address the incident.

e. The Permittee shall notify all Industrial Users of the users' obligations to comply with applicable requirements under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA) and that Industrial Users shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical as well as their obligation to notify the EPA Regional Waste Management Division Director, in writing of any discharge into the POTW of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include:

(1) the name of the hazardous waste as set forth in 40 CFR Part 261;

(2) the EPA hazardous waste number; and

(3) the type of discharge (continuous, batch, or other).

5. Annual Report Requirements

The Permittee shall provide EPA with a hard copy annual report that briefly describes the POTW's program activities, including activities of all participating agencies, if more than one jurisdiction is involved in the local program. The report required by this section shall be submitted no later than one year after approval of the POTW's Pretreatment Program, and at least annually thereafter. The report

must include, at a minimum, the applicable required data in Appendix A to 40 CFR Part 127, a summary of changes to the POTW's pretreatment program that have not been previously reported to EPA, and any other relevant information requested by EPA. Beginning on December 21, 2025 all annual reports submitted in compliance with this section must be submitted electronically by the POTW Pretreatment Program to EPA or initial recipient, as defined in 40 CFR § 127.2(b). Electronic submittals shall be in compliance with this section and 40 CFR Part 3 (including, in all cases, subpart D to Part 3), 40 CFR § 122.22(e), and 40 CFR Part 127 (Part 127 is not intended to undo existing requirements for electronic reporting). Prior to this date, and independent of 40 CFR Part 127, EPA may also require POTW Pretreatment Programs to electronically submit annual reports under this section if specified by a particular permit or if required to do so by state law.

The Permittee shall provide EPA with an annual report describing the Permittee's pretreatment program activities for the twelve (12) month period ending 60 days prior to the due date in accordance with 40 CFR § 403.12(i). The annual report shall be consistent with the format described in Attachment C (NPDES Permit Requirement for Industrial Pretreatment Annual Report) of this permit and shall be submitted by **March 31** of each year.

6. Beginning the first full calendar year after the effective date of the permit, the Permittee shall commence annual sampling of the following types of industrial discharges into the POTW:

   - Commercial Car Washes
   - Platers/Metal Finishers
   - Paper and Packaging Manufacturers
   - Tanneries and Leather/Fabric/Carpet Treaters
   - Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or teflon type coatings (*e.g.*, bearings)
   - Landfill Leachate
   - Centralized Waste Treaters
   - Known or Suspected PFAS Contaminated Sites
   - Fire Fighting Training Facilities
   - Airports
   - Any Other Known or Expected Sources of PFAS

   Sampling shall be conducted using Method 1633 for the PFAS analytes listed in Attachment D. The industrial discharges sampled, and the sampling results shall be summarized and included in the annual report (see Part I.E.5).

F. SLUDGE CONDITIONS

1. The Permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including EPA regulations promulgated at 40 CFR § 503, which prescribe "Standards for the Use or Disposal of Sewage Sludge" pursuant to § 405(d) of the CWA, 33 U.S.C. § 1345(d).

2. If both state and federal requirements apply to the Permittee's sludge use and/or disposal practices, the Permittee shall comply with the more stringent of the applicable requirements.

3. The requirements and technical standards of 40 CFR Part 503 apply to the following sludge use or disposal practices:

a. Land application - the use of sewage sludge to condition or fertilize the soil

b. Surface disposal - the placement of sewage sludge in a sludge only landfill

c. Sewage sludge incineration in a sludge only incinerator

4. The requirements of 40 CFR Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 CFR § 503.4. These requirements also do not apply to facilities which do not use or dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g., lagoons, reed beds), or are otherwise excluded under 40 CFR § 503.6.

5. The 40 CFR Part 503 requirements include the following elements:

a. General requirements

b. Pollutant limitations

c. Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)

d. Management practices

e. Record keeping

f. Monitoring

g. Reporting

Which of the 40 CFR Part 503 requirements apply to the Permittee will depend upon the use or disposal practice followed and upon the quality of material produced by a facility. The EPA Region 1 guidance document, "EPA Region 1 - NPDES Permit Sludge Compliance Guidance" (November 4, 1999), may be used by the Permittee to assist it in determining the applicable requirements.

6. The sludge shall be monitored for pollutant concentrations (all Part 503 methods) and pathogen reduction and vector attraction reduction (land application and surface disposal) at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year, as follows:

less than 290	1/ year
290 to less than 1,500	1 /quarter
1,500 to less than 15,000	6 /year
15,000 +	1 /month

Sampling of the sewage sludge shall use the procedures detailed in 40 CFR § 503.8.

7. Under 40 CFR § 503.9(r), the Permittee is a "person who prepares sewage sludge" because it "is … the person who generates sewage sludge during the treatment of domestic sewage in a treatment works …." If the Permittee contracts with another "person who prepares sewage sludge" under 40 CFR § 503.9(r) – i.e., with "a person who derives a material from sewage sludge" – for use or disposal of the sludge, then compliance with Part 503 requirements is the responsibility of the contractor engaged for that purpose. If the Permittee does not engage a "person who prepares sewage sludge," as defined in 40 CFR § 503.9(r),

for use or disposal, then the Permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 CFR § 503.7. If the ultimate use or disposal method is land application, the Permittee is responsible for providing the person receiving the sludge with notice and necessary information to comply with the requirements of 40 CFR § 503 Subpart B.

8. The Permittee shall submit an annual report containing the information specified in the 40 CFR Part 503 requirements (§ 503.18 (land application), § 503.28 (surface disposal), or § 503.48 (incineration)) by February 19 (see also "EPA Region 1 - NPDES Permit Sludge Compliance Guidance"). Reports shall be submitted electronically using EPA's Electronic Reporting tool ("NeT") (see "Reporting Requirements" section below).

G. SPECIAL CONDITIONS

1. Nitrogen Optimization Requirement

   The Permittee shall continue to optimize the treatment facility operations relative to total nitrogen (TN) removal through measures and/or operational changes designed to enhance the removal of nitrogen in order to minimize the annual average mass discharge of total nitrogen.

   The Permittee shall submit an annual report to EPA and the State, 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 and the previous five (5) calendar years. If, in any year, the treatment facility discharges of TN on an average annual basis have increased, 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 include all supporting data.

H. COMBINED SEWER OVERFLOWS (CSOs)

1. During wet weather (including snowmelt), the Permittee is authorized to discharge storm water/wastewater from the CSO Outfalls listed below to the Connecticut River.

Outfall	Latitude	Longitude	Description
002	42° 10' 18.1305" N	72° 37' 47.8194" W	Providence Hospital
007	42° 11' 11.4228" N	72° 37' 22.3278" W	Northampton St./Glen St
008	42° 11' 17.4372" N	72° 37' 6.3366" W	Springdale Park
009	42° 11' 24.8244" N	72° 36' 42.6636" W	Berkshire
016	42° 12' 14.0868" N	72° 36' 27.7122" W	Front St./Appleton St.
018	42° 12' 42.3" N	72° 36' 21.8442" W	Walnut St.
019	42° 13' 9.2496" N	72° 36' 46.872" W	Yale St.
020	42° 13' 31.9578" N	72° 37' 2.0136" W	Cleveland St.
021	42° 13' 41.7966" N	72° 37' 21.4782" W	River Terrace
023	42° 13' 20.6226" N	72° 37' 28.4304" W	Jefferson

2. The effluent discharged from the CSO is subject to the following limitations:

   a. The discharges shall receive treatment at a level providing Best Practicable Control Technology Currently Available ("BPT"), Best Conventional Pollutant Control Technology ("BCT") to control and abate conventional pollutants and Best Available Technology Economically Achievable ("BAT") to control and abate non-conventional and toxic pollutants. The EPA has made a Best Professional

Judgment (BPJ) determination that BPT, BCT, and BAT for combined sewer overflow (CSO) control includes the implementation of Nine Minimum Controls (NMC) specified below. These Nine Minimum Controls and the Nine Minimum Controls Minimum Implementation Levels which are detailed further in Part I.H.3. are requirements of this permit.

(1) Proper operation and regular maintenance programs for the sewer system and the combined sewer overflows;

(2) Maximum use of the collection system for storage;

(3) Review and modification of the pretreatment program to assure CSO impacts are minimized;

(4) Maximization of flow to the POTW for treatment;

(5) Prohibition of dry weather overflows from CSOs;

(6) Control of solid and floatable materials in CSOs;

(7) Pollution prevention programs that focus on contaminant reduction activities;

(8) Public notification to ensure that the public receives adequate notification of CSO occurrences and impacts;

(9) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

b. The discharges shall not cause or contribute to violations of federal or state Water Quality Standards.

3. Nine Minimum Controls Minimum Implementation Levels

a. 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 controls identified in Part I.H.3.b-g of this permit plus other controls the Permittee can reasonably undertake as set forth in the documentation.

b. 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). The following inspection results shall be recorded: the date and time of inspection, the general condition of the facility, and whether the facility is operating satisfactorily. If maintenance is necessary, the Permittee shall record: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. The Permittee shall maintain all records of inspections for at least three years.

c. **Annually, by April 30th,** the Permittee shall submit a certification to MassDEP and EPA which states that the previous calendar year's monthly inspections were conducted, results recorded, and records maintained. MassDEP and EPA have the right to inspect any CSO related structure or outfall at any time without prior notification to the Permittee. 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 (NMC # 3, 6, and 7).

d. Dry weather overflows ("DWOs") are prohibited (NMC # 5). All dry weather sanitary and/or industrial discharges from CSOs must be reported to EPA and MassDEP orally within 24 hours of the time the Permittee becomes aware of the circumstances and a report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances using "NeT" as described in Part I.I.4 below. See also Paragraph D.1.e. of Part II of this permit.

e. The Permittee shall quantify and record all discharges from combined sewer outfalls (NMC # 9). Quantification shall be through direct measurement. The following information must be recorded for each combined sewer outfall for each discharge event, as set forth in Part I.H.4.:

- Duration (hours) of discharge;
- Volume (gallons) of discharge;
- National Weather Service precipitation data from the nearest gage where precipitation is available at daily (24-hour) intervals and the nearest gage where precipitation is available at one-hour intervals. Cumulative precipitation per discharge event shall be calculated.

The Permittee shall maintain all records of discharges for at least six years after the effective date of this permit.

f. The Permittee shall install and maintain identification signs for all combined sewer outfall structures (NMC # 8). The signs must be located at or near the combined sewer outfall structures and easily readable by the public from the land and water. These signs shall be a minimum of 12 x 18 inches in size, with white lettering against a green background, and shall contain the following information:

CITY OF HOLYOKE
WET WEATHER
SEWAGE DISCHARGE
OUTFALL (discharge serial number)

The Permittee, to the extent feasible, shall add a universal wet weather sewage discharge symbol to existing signs.

Where there are easements over property not owned by the Permittee that must be obtained to meet this requirement, the Permittee shall identify the appropriate landowners and obtain the necessary easements, to the extent practicable.

g. Public Notification Plan

(1) Within 180 days of the effective date of the permit, the Permittee shall submit to EPA and MassDEP a Public Notification Plan describing the measures that will be taken to meet NMC#8 in Part I.H.2 of this permit (NMC #8). The Public Notification Plan shall include the means for disseminating information to the public, including communicating the initial, supplemental, and annual notifications required in Part I.H.3.g.(2), (3) and (4) of this permit, as well as procedures for communicating with public health departments, including downstream communities, whose waters may be affected by discharges from the Permittee's CSOs.

(2) Initial notification of a probable CSO activation shall be provided to the public as soon as practicable, but no later than, two (2) hours after becoming aware by monitoring, modeling or other

means that a CSO discharge may have occurred. In addition to posting this notification to a website, this information may also be communicated using other electronic means. The initial notification shall include the following information:

- Date and time of probable CSO discharge
- CSO number and location

(3) Supplemental notification shall be provided to the public as soon as practicable, but no later than, twenty-four (24) hours after becoming aware of the termination of any CSO discharge(s). In addition to posting this notification to a website, this information may also be communicated using other electronic means. The supplemental notification shall include the following information:

- CSO number and location
- Confirmation of CSO discharge
- Date, start time and stop time of the CSO discharge

(4) Annual notification - **Annually, by April 30th**, the Permittee shall post the annual report for the previous calendar year described in Part I.H.4 below on a publicly available website, and it shall remain on the website for a minimum of 24 months.

(5) The Public Notification Plan shall be implemented no later than 12 months following the effective date of the Permit.

4. Nine Minimum Controls Reporting Requirement

Annually, by 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 information on the locations of CSOs, a summary of CSO outfall monitoring data required by Part I.H.5 of this permit, status and progress of CSO abatement work, and the impacts of CSOs on water quality of the receiving water.

5. Combined Sewer Overflow Outfall Monitoring

For CSO Outfalls 002, 007, 008, 016, 018, 019, 020, 021, and 023, the Permittee must monitor and report the following:

Parameters	**Reporting Requirements**	**Monitoring Requirements**	
	Total Monthly	**Measurement Frequency**	**Sample Type**
Total Flow	Report Gallons	Daily, when discharging	Continuous
Total Flow Duration (Duration of flow through CSO)	Report Hours	Daily, when discharging	Continuous
Number of CSO Discharge Events	Report Monthly Count	Daily, when discharging	Count

a. For Total Flow, measure the total flow discharged from each CSO outfall during the month. For Total

Flow Duration, report the total duration (hours) of discharges for each CSO outfall during the month.

b. For those months when a CSO discharge does not occur, the Permittee must indicate "no discharge" for the outfall for which data was not collected.

c. This information shall be reported for each monthly DMR and submitted with the annual report required by Part I.H.4. of this permit.

6. Berkshire Street CSO Treatment Facility

Discharges from the Berkshire Street CSO Treatment Facility to CSO Outfall 009 are subject to water quality-based limits and technology-based numeric effluent limits as enhanced minimum controls for CSO Outfall 009, as set forth below. Additional monitoring and reporting requirements also apply.

Outfall 009 and Berkshire Street CSO Treatment Facility, Effluent Limitations and Monitoring Requirements				
EFFLUENT	**EFFLUENT LIMITS**		**MONITORING REQUIREMENTS**	
PARAMETER	**AVERAGE MONTHLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
E. Coli Bacteria[1]	126 cfu/100 ml	409 cfu/100 ml	1 Event/Month, Hourly	Grab
Total Residual Chlorine[2]	---	0.24 mg/L	Hourly	Grab
pH Range	Report Maximum and Minimum, S.U.		1 Event/Month	Grab
BOD_5[3]	Report mg/L and lb/day	Report mg/L and lb/day	2/Year	Event Composite[4]
TSS[3]	Report mg/L and lb/day	Report mg/L and lb/day	2/Year	Event Composite[4]
Total Kjeldahl Nitrogen, Nitrate, Nitrite, Ammonia as Nitrogen, and Total Nitrogen [3,5]	Report mg/L and lb/day	********	2/Year	Event Composite[4]
LC_{50} [6]	Report		2/Year	Event Composite[4]

Parameter	**Total Monthly**	**Measurement Frequency**	**Sample Type**
Total Flow (Treated Flow from Facility)[7]	Report Gallons	Daily, when discharging	Continuous
Total Flow (Untreated Flow to River)[7]	Report Gallons	Daily, when discharging	Continuous
Total Flow (Drained back to WPCF)[7]	Report Gallons	Daily, when discharging	Continuous
Total Flow (Duration of flow through facility)	Report Hours	Daily, when discharging	Continuous
Number of CSO Events	Report Monthly Count	Daily, when discharging	Count

*Footnotes for Outfall 009 and Berkshire Street CSO Treatment Facility:

1. Hourly sampling for *E. coli* will be performed for a four-hour duration. If the event lasts longer than four (4) hours, no further sampling is required. If hourly sampling is started and the event does not last at least four hours, another event during that month will be used for the hourly testing. The limits for *E. coli* are expressed as a geometric mean.

2. Monitoring shall be conducted for all events in which duration of flow from the facility exceeds 15 minutes. Hourly sampling for total residual chlorine will be performed for each hour up to a four-hour duration. If the event lasts longer than four (4) hours, sampling will be required every four hours after the fourth hour.

3. The Permittee shall collect BOD_5, TSS, total Kjeldahl nitrogen, nitrite, nitrate and ammonia samples two times per year in May and November.

4. Event composite must represent an event duration of at least four hours. An event composite is considered to represent an event duration of at least four hours where (i) the composite represents at least four consecutive hours of flow through the facility; or (ii) the composite represents at least four hours of flow during a 24 hour period starting at approximately 8:00 AM each day (± 2 hours) coinciding with the Permittee's composite sampling schedule, if flow through the facility is discontinuous.

5. The total Kjeldahl nitrogen, nitrite, nitrate and ammonia samples shall be collected concurrently. The results of the total Kjeldahl nitrogen, nitrite, and nitrate analyses may be used to determine the concentration and mass loading of total nitrogen. The Permittee shall report the monitoring results for each species of nitrogen as well as total nitrogen.

6. The Permittee shall conduct acute toxicity tests two times per year (*i.e.*, in May and November. The test results shall be submitted by the last day of the month following the completion of the test. The results are due June 30 and December 31, respectively. If weather does not permit collection of a four-hour composite in these months, the tests may be delayed to the first available event of four hour or more duration. The Permittee shall test the daphnid, Ceriodaphnia dubia, only. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit, except that the Permittee may use an alternate dilution water.

7. The Permittee shall also submit a monthly operating report, as an attachment to their monthly DMR, for the Berkshire Street CSO Treatment Facility. The monthly operating reports shall contain:

   (i) Total precipitation for each day (whether or not there was flow through facility);
   (ii) Date on which flow through facility occurred;
   (iii) Time in which the flow initiated;
   (iv) Total Duration of flow through facility for each day (hours);
   (v) Treated flow from facility (gallons);
   (vi) Untreated flow to river (gallons);
   (vii) Flow drained back to WPCD (gallons);
   (viii) Concurrent flow rate at the WPCD (gallons);
   (ix) Monitoring results for each event.

I. REPORTING REQUIREMENTS

Unless otherwise specified in this permit, the Permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs Using NetDMR

The Permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and the State electronically using NetDMR no later than the 15th day of the month. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. See Part I.I.7. for more information on State reporting. 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 with the next DMR due following the report due date specified in this permit.

3. Submittal of Industrial User and Pretreatment Related Reports

a. Prior to 21 December 2025, all reports and information required of the Permittee in the Industrial Users and Pretreatment Program section of this permit shall be submitted to the Pretreatment Coordinator in EPA Region 1 Water Division (WD). Starting on 21 December 2025, these submittals must be done electronically as NetDMR attachments and/or using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/. These requests, reports and notices include:

(1) Annual Pretreatment Reports,

(2) Pretreatment Reports Reassessment of Technically Based Industrial Discharge Limits Form,

(3) Revisions to Industrial Discharge Limits,

(4) Report describing Pretreatment Program activities, and

(5) Proposed changes to a Pretreatment Program

b. This information shall be submitted to EPA WD as a hard copy at the following address:

U.S. Environmental Protection Agency
Water Division
Regional Pretreatment Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912

4. Submittal of Biosolids/Sewage Sludge Reports

By February 19 of each year, the Permittee must electronically report their annual Biosolids/Sewage Sludge Report for the previous calendar year using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

5. Submittal of Requests and Reports to EPA Water Division (WD)

a. The following requests, reports, and information described in this permit shall be submitted to the NPDES Applications Coordinator in EPA Water Division (WD):

(1) Transfer of permit notice;

(2) Request for changes in sampling location;

(3) Request for reduction in testing frequency;

(4) Report on unacceptable dilution water / request for alternative dilution water for WET testing;

b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov.

6. Submittal of Sewer Overflow and Bypass Reports and Notifications

The Permittee shall submit required reports and notifications under Part II.B.4.c, for bypasses, and Part II.D.1.e, for sanitary sewer overflows (SSOs) electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), which will be accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

7. State Reporting

Duplicate signed copies of all WET test reports shall be submitted to the Massachusetts Department of Environmental Protection, Division of Watershed Management, at the following address:

Massachusetts Department of Environmental Protection
Bureau of Water Resources
Division of Watershed Management
8 New Bond Street
Worcester, Massachusetts 01606

8. Verbal Reports and Verbal Notifications

   a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to both EPA and to the State. This includes verbal reports and notifications which require reporting within 24 hours (e.g., Part II.B.4.c.(2), Part II.B.5.c.(3), and Part II.D.1.e).

   b. Verbal reports and verbal notifications shall be made to:

EPA ECAD at 617-918-1510
and
MassDEP Emergency Response at 888-304-1133

J. STATE 401 CERTIFICATION CONDITIONS

1. Pursuant to M.G.L. c. 21, §§ 26-53, and 314 CMR 3.00 and 4.00, including 314 CMR 3.11 (2)(a)6., and in order to ensure the maintenance of surface waters free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife, in accordance with 314 CMR 4.05(5)(e), MassDEP has determined that it is necessary that beginning six (6) months after the effective date of the 2024 NPDES permit, the permittee shall commence annual monitoring of all Significant Industrial Users[14,15] discharging into the POTW using Draft Method 1633. Notwithstanding any other provision of the 2024 NPDES permit to the contrary, PFAS monitoring results for the 2024 NPDES permit and for the 2024 Massachusetts Surface Water Discharge ("SWD") Permit shall be reported to MassDEP's electronic database (eDEP) in accordance with the information available at the following website: the https://www.mass.gov/how-to/submit-wastewaterresiduals-pfas-data-via-edep., or as otherwise specified, within 30 days after the permittee receives the sampling results.

2. On or before January 31, 2025, the permittee shall submit to MassDEP at massdep.npdes@mass.gov a listing of all industrial dischargers with their addresses to be

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14 Significant Industrial User (SIU) is defined at 40 CFR part 403: All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subpart N; **and** any other industrial user that: discharges an average of 25,000 GPD or more of process wastewater to the POTW, contributes a process wastestream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW, or designated as such by the POTW on the basis that the industrial users has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standards or requirement.

15 This requirement applies to all Significant Industrial Users and not just those within the sectors identified by EPA in the NPDES permit.

sampled in accordance with both the 2024 NPDES permit and the 2024 SWD and shall include:

i. All industries included in the categories listed in the 2024 NPDES permit Section IE, Industrial Users and Pretreatment Program, Paragraph 6; and
ii. All Significant Industrial Users as required by Paragraph 7 of the 2024 SWD.

The listing shall be maintained by the permittee and updated with any changes. Whenever necessary, a copy of the updated listing reflecting changes shall be forwarded to MassDEP at massdep.npdes@mass.gov on or before the next January 31.

ATTACHMENT A

USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) definitive 48 hour test.**
- **Fathead Minnow (Pimephales promelas) definitive 48 hour test.**

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

http://water.epa.gov/scitech/methods/cwa/wet/disk2_index.cfm

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6°C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternate dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
5 Post Office Sq., Suite 100 (OEP06-5)
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
5 Post Office Sq., Suite 100 (OES04-4)
Boston, MA 02109-3912

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at http://www.epa.gov/region1/enforcement/water/dmr.html *for further important details on alternate dilution water substitution requests.*

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS[1]

1.	Test type	Static, non-renewal
2.	Temperature (°C)	20 ± 1°C or 25 ± 1°C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and Selenastrum to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^R or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	≥ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution

		series.
16.	Effect measured	Mortality-no movement of body or appendages on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection.
19.	Sample volume required	Minimum 1 liter

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW (PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST[1]

1.	Test Type	Static, non-renewal
2.	Temperature (°C)	20 ± 1 ° C or 25 ± 1°C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hr light, 8 hr dark
5.	Size of test vessels	250 mL minimum
6.	Volume of test solution	Minimum 200 mL/replicate
7.	Age of fish	1-14 days old and age within 24 hrs of each other
8.	No. of fish per chamber	10
9.	No. of replicate test vessels per treatment	4
10.	Total no. organisms per concentration	40
11.	Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12.	Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13.	dilution water[2]	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q^R or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	≥ 0.5, must bracket the permitted RWC

15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16.	Effect measured	Mortality-no movement on gentle prodding
17.	Test acceptability	90% or greater survival of test organisms in dilution water control solution
18.	Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19.	Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3]	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 2340B (hardness by calculation)
     - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
   - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
     - Method 4500-CL E Low Level Amperometric Titration
     - Method 4500-CL G DPD Colorimetric Method
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Karber
- Trimmed Spearman-Karber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

ATTACHMENT B

EPA - New England

Reassessment of Technically Based Industrial Discharge Limits

Under 40 CFR §122.21(j)(4), all Publicly Owned Treatment Works (POTWs) with approved Industrial Pretreatment Programs (IPPs) shall provide the following information to the Director: a written evaluation of the need to revise local industrial discharge limits under 40 CFR §403.5(c)(1).

Below is a form designed by the U.S. Environmental Protection Agency (EPA - New England) to assist POTWs with approved IPPs in evaluating whether their existing Technically Based Local Limits (TBLLs) need to be recalculated. The form allows the permittee and EPA to evaluate and compare pertinent information used in previous TBLLs calculations against present conditions at the POTW.

Please read direction below before filling out form.

ITEM I.

* In Column (1), list what your POTW's influent flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present influent flow rate. Your current flow rate should be calculated using the POTW's average daily flow rate from the previous 12 months.

* In Column (1) list what your POTW's SIU flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present SIU flow rate.

* In Column (1), list what dilution ratio and/or 7Q10 value was used in your old/expired NPDES permit. In Column (2), list what dilution ration and/or 7Q10 value is presently being used in your new/reissued NPDES permit.

  The 7Q10 value is the lowest seven day average flow rate, in the river, over a ten year period. The 7Q10 value and/or dilution ratio used by EPA in your new NPDES permit can be found in your NPDES permit "Fact Sheet."

* In Column (1), list the safety factor, if any, that was used when your existing TBLLs were calculated.

* In Column (1), note how your bio-solids were managed when your existing TBLLs were calculated. In Column (2), note how your POTW is presently disposing of its biosolids and how your POTW will be disposing of its biosolids in the future.

ITEM II.

* List what your existing TBLLs are - as they appear in your current Sewer Use Ordinance (SUO).

ITEM III.

* Identify how your existing TBLLs are allocated out to your industrial community. Some pollutants may be allocated differently than others, if so please explain.

ITEM IV.

* Since your existing TBLLs were calculated, identify the following in detail:

  (1) if your POTW has experienced any upsets, inhibition, interference or pass-through as a result of an industrial discharge.

  (2) if your POTW is presently violating any of its current NPDES permit limitations - include toxicity.

ITEM V.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in pounds per day) received in the POTW's influent. Current sampling data is defined as data obtained over the last 24 month period.

  All influent data collected and analyzed must be in accordance with 40 CFR §136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

* Based on your existing TBLLs, as presented in Item II., list in Column (2), for each pollutant the Maximum Allowable Headwork Loading (MAHL) values derived from an applicable environmental criteria or standard, e.g. water quality, sludge, NPDES, inhibition, etc. For more information, please see EPA's Local Limit Guidance Document (July 2004).

Item VI.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in micrograms per liter) present your POTW's effluent. Current sampling data is defined as data obtained during the last 24 month period.

(Item VI. continued)

All effluent data collected and analyzed must be in accordance with 40 CFR §136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

* List in Column (2A) what the Water Quality Standards (WQS) were (in micrograms per liter) when your TBLLs were calculated, please note what hardness value was used at that time. Hardness should be expressed in milligram per liter of Calcium Carbonate.

List in Column (2B) the current WQSs or "Chronic Gold Book" values for each pollutant multiplied by the dilution ratio used in your new/reissued NPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 25 mg/l - Calcium Carbonate (copper's chronic WQS equals 6.54 ug/l) the chronic NPDES permit limit for copper would equal 156.25 ug/l.

ITEM VII.

* In Column (1), list all pollutants (in micrograms per liter) limited in your new/reissued NPDES permit. In Column (2), list all pollutants limited in your old/expired NPDES permit.

ITEM VIII.

* Using current sampling data, list in Column (1) the average and maximum amount of pollutants in your POTW's biosolids. Current data is defined as data obtained during the last 24 month period. Results are to be expressed as total dry weight.

All biosolids data collected and analyzed must be in accordance with 40 CFR §136.

In Column (2A), list current State and/or Federal sludge standards that your facility's biosolids must comply with. Also note how your POTW currently manages the disposal of its biosolids. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria will be and method of disposal.

In general, please be sure the units reported are correct and all pertinent information is included in your evaluation. If you have any questions, please contact your pretreatment representative at EPA - New England.

REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS (TBLLs)

POTW Name & Address : _____

NPDES PERMIT # :
_____

Date EPA approved current TBLLs : _____

Date EPA approved current Sewer Use Ordinance :
_____

ITEM I.

In Column (1) list the conditions that existed when your current TBLLs were calculated. In Column (2), list current conditions or expected conditions at your POTW.		
	Column (1) EXISTING TBLLs	Column (2) PRESENT CONDITIONS
POTW Flow (MGD)		
Dilution Ratio or 7Q10 (from NPDES Permit)		
SIU Flow (MGD)		
Safety Factor		N/A
Biosolids Disposal Method(s)		

ITEM II.

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)

ITEM III.

Note how your existing TBLLs, listed in Item II., are allocated to your Significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. Please specify by circling.

ITEM IV.

Has your POTW experienced any upsets, inhibition, interference or pass-through from industrial sources since your existing TBLLs were calculated?
If yes, explain.

_____

_____

Has your POTW violated any of its NPDES permit limits and/or toxicity test requirements?

If yes, explain.

_____

_____

ITEM V.

Using current POTW influent sampling data fill in Column (1). In Column (2), list your Maximum Allowable Headwork Loading (MAHL) values used to derive your TBLLs listed in Item II. In addition, please note the Environmental Criteria for which each MAHL value was established, i.e. water quality, sludge, NPDES etc.				
Pollutant	Column (1) Influent Data Analyses Maximum (lb/day)	Average (lb/day)	Column (2) MAHL Values (lb/day)	Criteria
Arsenic				
Cadmium				
Chromium				
Copper				
Cyanide				
Lead				
Mercury				
Nickel				
Silver				
Zinc				
Other (List)				

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Water Quality Standards (Gold Book Criteria) were at the time your existing TBLLs were developed. List in Column (2B) current Gold Book values multiplied by the dilution ratio used in your new/reissued NPDES permit.

Pollutant	Column (1) Effluent Data Analyses		Columns (2A) (2B) Water Quality Criteria (Gold Book) From TBLLs Today	
	Maximum (ug/l)	Average (ug/l)	(ug/l)	(ug/l)
Arsenic				
*Cadmium				
*Chromium				
*Copper				
Cyanide				
*Lead				
Mercury				
*Nickel				
Silver				
*Zinc				
Other (List)				

*Hardness Dependent (mg/l - $CaCO_3$)

ITEM VII.

In Column (1), identify all pollutants limited in your new/reissued NPDES permit. In Column (2), identify all pollutants that were limited in your old/expired NPDES permit.

Column (1) NEW PERMIT Pollutants Limitations (ug/l)		Column (2) OLD PERMIT Pollutants	Limitations (ug/l)

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that was used at the time your existing TBLLs were calculated. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria would be and method of disposal.

Pollutant	Column (1) Biosolids Data Analyses Average (mg/kg)	Columns (2A) (2B) Biosolids Criteria From TBLLs New (mg/kg) (mg/kg)	
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

ATTACHMENT C

NPDES PERMIT REQUIREMENT FOR INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

1. An updated list of all industrial users by category, as set forth in 40 C.F.R. 403.8(f)(2)(i), indicating compliance or noncompliance with the following:
   - baseline monitoring reporting requirements for newly promulgated industries
   - compliance status reporting requirements for newly promulgated industries
   - periodic (semi-annual) monitoring reporting requirements,
   - categorical standards, and
   - local limits;

2. A summary of compliance and enforcement activities during the preceding year, including the number of:
   - significant industrial users inspected by POTW (include inspection dates for each industrial user),
   - significant industrial users sampled by POTW (include sampling dates for each industrial user),
   - compliance schedules issued (include list of subject users),
   - written notices of violations issued (include list of subject users),
   - administrative orders issued (include list of subject users),
   - criminal or civil suits filed (include list of subject users) and,
   - penalties obtained (include list of subject users and penalty amounts);

3. A list of significantly violating industries required to be published in a local newspaper in accordance with 40 C.F.R. 403.8(f)(2)(vii);

4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority;

5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the Wastewater Treatment System and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this Permit.

At a minimum, annual sampling and analysis of the influent and effluent of the Wastewater Treatment Plant shall be conducted for the following pollutants:

a.) Total Cadmium
b.) Total Chromium
c.) Total Copper
d.) Total Lead
e.) Total Mercury
f.) Total Nickel
g.) Total Silver
h.) Total Zinc
i.) Total Cyanide
j.) Total Arsenic

The sampling program shall consist of one 24-hour flow-proportioned composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually or shall consist of a minimum of 48 samples collected at 30 minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year;

7. A thorough description of all investigations into interference and pass-through during the past year;

8. A description of monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying parameters and frequencies;

9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users; and,

10. The date of the latest adoption of local limits and an indication as to whether or not the permittee is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

Attachment D: PFAS Analyte List

Target Analyte Name	Abbreviation	CAS Number
Perfluoroalkyl carboxylic acids		
Perfluorobutanoic acid	PFBA	375-22-4
Perfluoropentanoic acid	PFPeA	2706-90-3
Perfluorohexanoic acid	PFHxA	307-24-4
Perfluoroheptanoic acid	PFHpA	375-85-9
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluoroundecanoic acid	PFUnA	2058-94-8
Perfluorododecanoic acid	PFDoA	307-55-1
Perfluorotridecanoic acid	PFTrDA	72629-94-8
Perfluorotetradecanoic acid	PFTeDA	376-06-7
Perfluoroalkyl sulfonic acids		
Acid Form		
Perfluorobutanesulfonic acid	PFBS	375-73-5
Perfluoropentansulfonic acid	PFPeS	2706-91-4
Perfluorohexanesulfonic acid	PFHxS	355-46-4
Perfluoroheptanesulfonic acid	PFHpS	375-92-8
Perfluorooctanesulfonic acid	PFOS	1763-23-1
Perfluorononanesulfonic acid	PFNS	68259-12-1
Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Fluorotelomer sulfonic acids		
1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4
1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2
1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4
Perfluorooctane sulfonamides		
Perfluorooctanesulfonamide	PFOSA	754-91-6
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8
N-ethyl perfluorooctanesulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids		
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols		
N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	24448-09-7
N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE	1691-99-2
Per- and Polyfluoroether carboxylic acids		
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
4,8-Dioxa-3*H*-perfluorononanoic acid	ADONA	919005-14-4
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6

Target Analyte Name	Abbreviation	CAS Number
Ether sulfonic acids		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7
Fluorotelomer carboxylic acids		
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5
2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid	5:3FTCA	914637-49-3
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)[1]

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[1] Updated July 17, 2018 to fix typographical errors.

A. GENERAL REQUIREMENTS

1. Duty to Comply

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

a. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

b. Penalties for Violations of Permit Conditions: The Director will adjust the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (83 Fed. Reg. 1190-1194 (January 10, 2018) and the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note. See Pub. L.114-74, Section 701 (Nov. 2, 2015)). These requirements help ensure that EPA penalties keep pace with inflation. Under the above-cited 2015 amendments to inflationary adjustment law, EPA must review its statutory civil penalties each year and adjust them as necessary.

(1) Criminal Penalties

(a) *Negligent Violations.* The CWA provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than 2 years, or both.

(b) *Knowing Violations.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

(c) *Knowing Endangerment.* The CWA provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury shall upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing

endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(d) *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(2) *Civil Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(3) *Administrative Penalties*. The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:

(a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

(b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit

condition.

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

4. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

5. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

6. Confidentiality of Information

a. In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2 (Public Information).

b. Claims of confidentiality for the following information will be denied:

(1) The name and address of any permit applicant or Permittee;
(2) Permit applications, permits, and effluent data.

c. Information required by NPDES application forms provided by the Director under 40 C.F.R. § 122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

7. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit. The Permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

8. State Authorities

Nothing in Parts 122, 123, or 124 precludes more stringent State regulation of any activity

covered by the regulations in 40 C.F.R. Parts 122, 123, and 124, whether or not under an approved State program.

9. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

(1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

(2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. *Bypass not exceeding limitations.* The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this Section.

c. Notice

(1) *Anticipated bypass*. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by state law.

(2) *Unanticipated bypass*. The Permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (24-hour notice). As of December 21, 2020 all notices submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or required to do so by law.

d. *Prohibition of bypass.*

(1) 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 preventative maintenance; and

(c) The Permittee submitted notices as required under paragraph 4.c of this Section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 4.d of this Section.

5. Upset

a. *Definition*. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or

improper operation.

b. *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph B.5.c. of this Section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in paragraph D.1.e.2.b. (24-hour notice).
(4) The Permittee complied with any remedial measures required under B.3. above.

d. *Burden of proof.* In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

C. MONITORING REQUIREMENTS

1. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 C.F.R. § 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

c. Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.

d. Monitoring must be conducted according to test procedures approved under 40 C.F.R. § 136 unless another method is required under 40 C.F.R. Subchapters N or O.

e. The Clean Water Act provides that any person who falsifies, tampers with, or

knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

D. REPORTING REQUIREMENTS

1. Reporting Requirements

a. *Planned Changes*. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. § 122.29(b); or

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements at 40 C.F.R. § 122.42(a)(1).

(3) The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

b. *Anticipated noncompliance*. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

c. *Transfers*. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act. *See* 40 C.F.R. § 122.61; in some cases, modification or revocation and reissuance is mandatory.

d. *Monitoring reports*. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices. As of December 21, 2016 all reports and forms submitted in compliance with this Section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to report electronically if specified by a particular permit or if required to do so by State law.

(2) If the Permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 C.F.R. § 136, or another method required for an industry-specific waste stream under 40 C.F.R. Subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

e. *Twenty-four hour reporting.*

(1) The Permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written report shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020 all

reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases Subpart D to Part 3), § 122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit. *See* 40 C.F.R. § 122.41(g).
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. *See* 40 C.F.R. § 122.44(g).

(3) The Director may waive the written report on a case-by-case basis for reports under paragraph D.1.e. of this Section if the oral report has been received within 24 hours.

f. *Compliance Schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

g. *Other noncompliance.* The Permittee shall report all instances of noncompliance not reported under paragraphs D.1.d., D.1.e., and D.1.f. of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph D.1.e. of this Section. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in paragraph D.1.e. and the applicable required data in Appendix A to 40 C.F.R. Part 127. As of December 21, 2020 all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events submitted in compliance with this section must be submitted electronically by the Permittee to the Director or initial recipient, as defined in 40 C.F.R. § 127.2(b), in compliance with this Section and 40 C.F.R. Part 3 (including, in all cases, Subpart D to Part 3), §122.22, and 40 C.F.R. Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, Permittees may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law. The Director may also require Permittees to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this Section.

h. *Other information.* Where the Permittee becomes aware that it failed to submit any

relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

i. *Identification of the initial recipient for NPDES electronic reporting data*. The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in Appendix A to 40 C.F.R. Part 127) to the appropriate initial recipient, as determined by EPA, and as defined in 40 C.F.R. § 127.2(b). EPA will identify and publish the list of initial recipients on its Web site and in the FEDERAL REGISTER, by state and by NPDES data group (see 40 C.F.R. § 127.2(c) of this Chapter). EPA will update and maintain this listing.

2. Signatory Requirement

a. All applications, reports, or information submitted to the Director shall be signed and certified. *See* 40 C.F.R. §122.22.

b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under paragraph A.6. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

E. DEFINITIONS AND ABBREVIATIONS

1. General Definitions

For more definitions related to sludge use and disposal requirements, see EPA Region 1's NPDES Permit Sludge Compliance Guidance document (4 November 1999, modified to add regulatory definitions, April 2018).

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under Sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of the CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in

"approved States," including any approved modifications or revisions.

Approved program or *approved State* means a State or interstate program which has been approved or authorized by EPA under Part 123.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bypass see B.4.a.1 above.

C-NOEC or *"Chronic (Long-term Exposure Test) – No Observed Effect Concentration" means* the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 C.F.R. § 501.2, required to have an approved pretreatment program under 40 C.F.R. § 403.8 (a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 C.F.R. § 403.10 (e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. § 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483and Public Law 97-117, 33 U.S.C. 1251 *et seq*.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any

other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct Discharge means the "discharge of a pollutant."

Director means the Regional Administrator or an authorized representative. In the case of a permit also issued under Massachusetts' authority, it also refers to the Director of the Division of Watershed Management, Department of Environmental Protection, Commonwealth of Massachusetts.

Discharge

(a) When used without qualification, *discharge* means the "discharge of a pollutant."

(b) As used in the definitions for "interference" and "pass through," *discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under Section 307(b), (c) or (d) of the Act.

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by Permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection

Agency.

Grab Sample means an individual sample collected in a period of less than 15 minutes.

Hazardous substance means any substance designated under 40 C.F.R. Part 116 pursuant to Section 311 of CWA.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Indirect discharger means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

Interference means a discharge (see definition above) which, alone or in conjunction with a discharge or discharges from other sources, both:

(a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(b) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for agricultural purposes or for treatment and disposal.

LC_{50} means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC_{50} = 100% is defined as a sample of undiluted effluent.

Maximum daily discharge limitation means the highest allowable "daily discharge."

Municipal solid waste landfill (MSWLF) unit means a discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 C.F.R. § 257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, very small quantity generator waste and industrial solid waste. Such a landfill may be

publicly or privately owned. A MSWLF unit may be a new MSWLF unit, an existing MSWLF unit or a lateral expansion. A construction and demolition landfill that receives residential lead-based paint waste and does not receive any other household waste is not a MSWLF unit.

Municipality

(a) When used without qualification *municipality* means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

(b) As related to sludge use and disposal, *municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under Section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in Section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an "approved program."

New Discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants;"

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Director in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Director shall consider the factors specified in 40 C.F.R. §§ 125.122 (a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES programs.

Pass through means a Discharge (see definition above) which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (40 C.F.R § 122.28). "Permit" does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration measured at 25° Centigrade or measured at another temperature and then converted to an equivalent value at 25° Centigrade.

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, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 C.F.R. § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials

(except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), *modified* 12 E.R.C. 1833 (D.D.C. 1979)); also listed in Appendix A of 40 C.F.R. Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly owned treatment works (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 504(4) of the Act). This definition 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. The term also means the municipality as defined in Section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary industry category means any industry which is not a "primary industry category."

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 C.F.R. Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does

not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 C.F.R. § 122.2.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substance designated under Section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 C.F.R. §§ 110.10 and 117.21) or Section 102 of CERCLA (*see* 40 C.F.R. § 302.4).

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA, and is required to obtain a permit under 40 C.F.R. § 122.1(b)(2).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in the regulations which meets the requirements of 40 C.F.R. § 123.31.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Director may designate any person subject to the standards for sewage sludge use and

disposal in 40 C.F.R. Part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 C.F.R. Part 503.

Upset see B.5.a. above.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Waste pile or *pile* means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland.

Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test.

*Zone of Initial Dilution (*ZID) means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports, provided that the ZID may not be larger than allowed by mixing zone restrictions in applicable water quality standards.

2. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl2	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)
TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont.	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M^3/day	Cubic meters per day
DO	Dissolved oxygen

kg/day	Kilograms per day
lbs/day	Pounds per day
mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH3-N	Ammonia nitrogen as nitrogen
NO3-N	Nitrate as nitrogen
NO2-N	Nitrite as nitrogen
NO3-NO2	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	"Whole effluent toxicity"
ZID	Zone of Initial Dilution

RESPONSE TO COMMENTS
NPDES PERMIT NO. MA0101630
HOLYOKE WATER POLLUTION CONTROL FACILITY
HOLYOKE, MASSACHUSETTS

The U.S. Environmental Protection Agency's New England Region (EPA) is issuing a Final National Pollutant Discharge Elimination System (NPDES) Permit for the City of Holyoke Water Pollution Control Facility (WPCF) located in Holyoke, Massachusetts. This permit is being issued under the Federal Clean Water Act (CWA), 33 U.S.C., §§ 1251 *et seq.*

In accordance with the provisions of 40 Code of Federal Regulations (C.F.R.) §124.17, this document presents EPA's responses to comments received on the Draft NPDES Permit # MA0101630 ("Draft Permit"). The Response to Comments explains and supports EPA's determinations that form the basis of the Final Permit. From April 6, 2023, through June 5, 2023, EPA solicited public comments on the Draft Permit.

EPA received comments from:

- City of Holyoke, dated June 5, 2023
- Connecticut Department of Energy and Environmental Protection, dated June 2, 2023
- Connecticut River Conservancy, dated June 5, 2023
- The National Association of Clean Water Agencies (NACWA), dated June 5, 2023
- Upper Blackstone Clean Water, dated June 5, 2023
- Massachusetts Coalition for Water Resources Stewardship (MCWRS), dated June 5, 2023
- Springfield Water and Sewer Commission, dated June 5, 2023
- Massachusetts Water Resources Authority, dated June 5, 2023

Although EPA's knowledge of the facility has benefited from the various comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the permit that warranted a reopening of the public comment period. EPA does, however, make certain clarifications and changes in response to comments. These are explained in this document and reflected in the Final Permit. Below EPA provides a summary of the changes made in the Final Permit. The analyses underlying these changes are contained in the responses to individual comments that follow.

A copy of the Final Permit and this response to comments document will be posted on the EPA Region 1 web site: http://www.epa.gov/region1/npdes/permits_listing_ma.html.

A copy of the Final Permit may be also obtained by writing or calling Michele Duspiva, USEPA, 5 Post Office Square, Suite 100 (Mail Code: 06-4), Boston, MA 02109-3912; Telephone: (617) 918-1682; Email duspiva.michele@epa.gov.

Table of Contents

I. Summary of Changes to the Final Permit

1. The monthly average TRC limit for Outfall 009 has been removed. See Response 9.
2. The Final Permit cover page was updated to indicate that the receiving water is both Segments MA 34-05 and 34-04 of the Connecticut River. See Response 16.
3. The weekly average mass-based limits for TSS and BOD have been removed. See Response 40.
4. Footnote 12 of Part I.A. Table 1 of the Final Permit has been modified to indicate that monitoring for Adsorbable Organic Fluorine shall begin the first full calendar quarter following 6 months after EPA notifies the Permittee that Method 1621 has been multi-lab validated. See Response 42.
5. Part I.B.2 has been modified to align with state regulations at 314 CMR 16.00. See Response 43.
6. The Major Storm and Flood Events Plan (now renamed Adaptation Plan) requirements at Part I.C.1 of the Final Permit have been revised as described in Part B of the General Response.

II. General Response to Comments on the Appropriateness of, and the Authority for, the Inclusion of the Wastewater Treatment System and Sewer System Adaptation Plan ("General Response")

EPA recognizes that the Major Storm and Flood Events Plan (in the Final Permit, and in this Response to Comments, that plan is now referred to as an "Adaptation Plan") proposed in the Draft Permit and finalized here is a new requirement that builds on existing operation and maintenance practices.[1] EPA provides this General Response to further explain the basis for and importance of this provision. In so doing, EPA also responds to many of the comments raised regarding the Draft Permit.

In Section A of the General Response, EPA discusses the necessity for requiring Adaptation Plans at wastewater treatment systems ("WWTS") and sewer systems[2] and provides some examples of how major storm and flood events can impact facility operations. In Section B of the General Response, EPA discusses the various components and proper scope of the Adaptation Plans. In Section C of the General Response, EPA sets forth the legal basis for its decision to require wastewater treatment systems and sewer systems to develop Adaptation Plans.

A. Necessity for Wastewater Treatment System and Sewer System Adaptation Planning

Wastewater treatment systems and sewer systems are crucial in helping protect human health and the environment and providing critical services to the communities that they serve. Many wastewater treatment facilities and associated sewer system pump stations are located at low elevations (to maximize flow via gravity) within riverine or coastal floodplains and are at risk of increased flooding and other impacts from major storm events. As noted in a 2016 report by the New England Interstate Water Pollution Control Commission[3] wastewater systems are already facing severe effects due to major storm and flood events and need to better adapt to this new reality:

> In the Northeast and throughout the world, extreme storm events are growing in frequency and force. Hurricanes and blizzards threaten the operation of wastewater

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[1] For brevity, this Response to Comments document refers to "Permittee" throughout; however, this reference also includes all "Co-Permittee(s)" subject to the applicable permit requirements.

[2] The Clean Water Act authorizes EPA, as permit issuer, to issue permits for "publicly owned treatment works" (POTWs). CWA § 402. POTWs comprise wastewater treatment systems and sewer systems. 40 C.F.R. §§ 122.2, 403.3(q); *In re Charles River Pollution Control District*, 16 EAD 623, 635 (EAB 2015) ("POTW treatment plants, like the satellite sewage collection systems that convey wastewater to the plants, are components of a POTW.") To more precisely and accurately describe the permit requirements, the Permit and this Response to Comments refer to "wastewater treatment system(s)" and "sewer system(s)" or, in some instances, both.

"Wastewater Treatment System" or "WWTS" means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It does not include sewers, pipes and other conveyances to the wastewater treatment facility.

[3] "Preparing for Extreme Weather at Wastewater Utilities: Strategies and Tips, New England Interstate Water Pollution Control Commission" (September 2016) pg. 2, https://www.neiwpcc.org/neiwpcc_docs/9-20-2016%20NEIWPCC%20Extreme%20Weather%20Guide%20for%20web.pdf

infrastructure and in some cases the infrastructure itself. Consequently, wastewater facilities should be made more resilient though preparedness planning and physical upgrades.

In the Northeast in the last five years Hurricanes Irene (2011) and Sandy (2012), and winter blizzards such as the February 2013 northeaster, produced widespread economic harm. Sandy caused nearly 11 billion gallons of sewage to be released into coastal waters, rivers, and other bodies of water as power outages and storm surge overwhelmed wastewater-treatment plants. 94% of these releases were a result of flooding and storm surge as waters overwhelmed sewage-treatment plants.

As a result, addressing the ongoing challenges and the increasing risks faced by wastewater infrastructure systems nationwide - reduction or failure of system services resulting in discharges of untreated or partially treated sewage, flooding, physical damage to assets, impacts to personnel, to name just some of the possible outcomes - are a priority for EPA and a host of federal and state agencies, as well as regional and local governmental bodies. Addressing these challenges is also a priority for many wastewater treatment managers across the country. As noted in a 2019 study,[4] which surveyed wastewater treatment systems in Connecticut, 78% of wastewater managers had made adaptive changes that ranged from low-cost temporary adaptive changes to a few who described major changes that addressed redesign or the rebuilding of WWTPs; of those who had made changes, half "did so to improve resiliency to withstand the worst storm experienced by the wastewater system to date."[5]

Flooding and other major storm events can lead to a variety of, and more frequent, WWTS and sewer system failures. One recent analysis suggests that one-third of 5,500 wastewater treatment plants analyzed from around the country would be at risk of flooding in the event of a major storm.[6] System failures, such as backups of untreated wastewater into the collection system and potentially into buildings and connections, bypasses of pollution treatment, and/or discharges of raw sewage into the environment are some of the potential impacts that may become more frequent.[7]

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[4] "Kirchhoff, C.J. and P.L. Watson. 2019. "Are Wastewater Systems Adapting to Climate Change?" *Journal of the American Water Resources Association*, 1-12. pg.1. https://doi.org/10.1111/1752-1688.12748. (Citations omitted in quote).

[5] Id. at pgs. 5, 8.

[6] "Rising Flood Risks Threaten Many Water and Sewage Treatment Plants Across the U.S."(August 10, 2023), https://apnews.com/article/climate-change-flood-risks-infrastructure-vermont-7bd953f513035468ee74f8f7c619bb8e

[7] See EPA's Resilient Strategies Guide (noting that "[u]tilities are increasingly recognizing that future extreme weather events, energy prices and ecological conditions may not be predictable based on historical observations. These shifts may require utilities to change how they operate and manage their resources.") https://www.epa.gov/crwu/resilient-strategies-guide-water-utilities#/resources/646; EPA Memorandum, "Re-Instatement of Federal Flood Risk Management Standard for State Revolving Fund Programs," Thompkins, Anita Maria and Stein, Raffael to Water Division Directors (April, 2022) https://www.epa.gov/dwsrf/federal-flood-risk-management-standard-srf-programs (noting that "[f]looding is one of the most common hazards in the United Stated accounting for roughly $17 billion in damage annually between 2010-1018 according to [FEMA], and it will continue to be an ongoing challenge for water infrastructure" with impacts that "can include physical damage to assets, soil and streambank erosion and contamination of water sources, loss of power and communication, loss of access to facilities, saltwater intrusion, and dangerous conditions for personnel."). See also, National Association of

In New England, as well as elsewhere throughout the country,[8] storms and flooding have caused damage to, and in some cases total failure of, wastewater treatment systems and sewer systems. Implementing adaptive measures so that a wastewater treatment plant's wastewater infrastructure may withstand increasingly frequent heavy precipitation and major storm and flood events is, therefore, a critical step in a system's maintenance. Additionally, EPA notes that sometimes, mitigation measures based on adaptation/mitigation plans that were at one point sufficient and that were based on historic, local major storm and flood predictions, may now be insufficient given actual experience with major storms and flooding, the emergence of new data that was not previously available, and more recent projections. And while EPA also acknowledges that it may not always be possible to anticipate all future events (i.e., speed or direction of the wind, temperature fluctuations, the uprooting of trees, etc.) that can exacerbate, or alleviate, the outcomes of major storm and flood events, as illustrated in the examples below, it is important to ensure that existing adaptation plans reflect, as best as possible, all relevant data.

Many New England WWTSs have been negatively impacted by major storm and flood events in recent years. In one notable example from Rhode Island in 2010, historically high flood waters (known as "the Great Flood of 2010") severely impacted several wastewater treatment facilities, including the Warwick Rhode Island Wastewater Treatment Facility.[9] After repetitive flood damages to the WWTS, the City of Warwick had constructed a protective berm, or levee, in the mid-1980s to protect the WWTS from future damages. The levee, originally designed for the 100-year flood at that time, plus three feet of freeboard, was breached by repeated heavy rain events in March 2010. The flooding caused catastrophic impacts to the WWTS which led to the "unthinkable" - the decision to evacuate the plant as the Pawtuxet River crested at 20.79 feet.[10] The impact to the treatment plant was extreme:

> While the flood waters caused no structural damages to the facility's tanks or buildings, anything electrical and everything that was not metal or concrete was ruined. It was at least two days before the river had subsided to the point where staff could begin to access the facility.[11]

With a tremendous amount of work and rebuilding, the facility was dewatered, and primary and then secondary treatment were restored. The facility was unable to achieve full compliance with

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Clean Water Agencies ("NACWA"), "NACWA Principles on Climate Adaptation and Resiliency" (noting that "[f]or many clean water agencies, changing weather patterns have become a management reality and responsibility.") https://www.nacwa.org/docs/default-source/conferences-events/2018-ulc/nacwa-statement-of-principles-on-climate_.pdf?sfvrsn=2

[8] National Association of Clean Water Agencies ("NACWA") Fact Sheet: "10 Extreme Rain and Flood Events in the US – All in 2022" (listing the "top 10 flood events of 2022" and their effects on water infrastructure from across the country, including the devastating impacts that include loss of life, estimated damages in the range of millions to billions of dollars, and extreme impacts to system services.)

[9] Holbrook, Nicolas Q., The Flood Crews of 2010: A History of Rhode Island's 2010 Floods as Told By The State's Wastewater Collection and Treatment Operators, Rhode Island DEM, Office of Water Resources (2017) https://dem.ri.gov/sites/g/files/xkgbur861/files/programs/benviron/water/pdfs/floodcrews2010.pdf

[10] Id. at 13.

[11] Id.

its permit limits for a period of about 80 days.[12] Due to this flooding, the facility updated their flood protection plans based on local storm and flooding data and implemented improvements for the WWTS, including raising the levee to protect the WWTS from inundation caused by a 500-year flood event.[13]

Figure 1: The flooded Warwick wastewater facility on Wednesday, March 31, 2010. (State of Rhode Island)

More recently, in July 2023, Vermont experienced a major storm and flooding event characterized by the National Weather Service as "catastrophic flash flooding and river flooding" with upwards of three to nine inches of rain falling in 48 hours, an amount that in some places of Vermont, amounted to the "greatest calendar day rainfall "since records began in 1948.[14] According to local reporting, operations at 33 wastewater treatment systems were disrupted, and several facilities, like those in the towns of Ludlow and Johnson, were rendered inoperable and will need significant reconstruction.[15] As one news outlet reported about the conditions in Ludlow:

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[12] Burke, Janine L., Executive Director, Warwick Sewer Authority, "The Great Flood of 2010: A Municipal Response," pg. 237 Journal NEWEA (September 2012) https://www.warwicksewerauthority.com/pdfs/floodmitgation/NEWWA%20Journal%20Article%20on%20WSA%20Flood%20Response.pdf

[13] Preliminary Design Report, Wastewater Treatment Facility Flood Protection and Mitigation Design, Warwick, Rhode Island (Prepared by AECOM for Warwick Sewer Authority, July 12, 2012) https://www.warwicksewerauthority.com/pdfs/floodmitgation/Warwick%20Flood%20Mitigation%20PDR%207-24-12%20with%20Appendices.pdf,; Warwick Wastewater Treatment Facility – Climate Vulnerability Summary https://dem.ri.gov/sites/g/files/xkgbur861/files/programs/benviron/water/pdfs/cvswarwick.pdf

[14] Banacos, Peter, "The Great Vermont Flood of 10-11 July 2023: Preliminary Meteorological Summary" National Oceanic and Atmospheric Administration, National Weather Service, pg. 2 (August 5, 2023) https://www.weather.gov/btv/The-Great-Vermont-Flood-of-10-11-July-2023-Preliminary-Meteorological-Summary (noting that damage "rivaled and in some areas exceeded – Tropical Storm Irene in 2011")

[15] Robinson, Shaun, "Total Destruction:' Flooding Knocks Out Johnson's Wastewater Plant, Disrupts Operations Elsewhere" (July 18, 2023); https://vtdigger.org/2023/07/18/total-destruction-flooding-knocks-out-johnsons-wastewater-plant-disrupts-operations-elsewhere/ ("Across Vermont, 33 wastewater treatment facilities were impacted by the flooding …according to Michelle Kolb, a supervisor in the state Department of Environmental Conservation's wastewater program.")

[t]he facility that keeps the village's drinking water safe was built at elevation and survived. But its sewage plant fared less well. Flooding tore through it, uprooting chunks of road, damaging buildings and sweeping sewage from treatment tanks into the river. Even [over three weeks after the storm event] the plant can only handle half its normal load.[16]

Figure 2: Ludlow Wastewater Treatment Plant (photo August 2, 2023, taken after July storm event) [17]

The wastewater treatment plant in Johnson, Vermont was similarly devastated with the Assistant Plant Manager reporting to a local news outlet, "'Total destruction. The only thing we have left is the shell of a building.'" [18]

According to officials from Vermont DEC, both the Ludlow and Johnson WWTSs had some flood protections in place prior to this event: Ludlow built a new influent pump station designed to withstand a 500-year flood event in 2020-21.[19] While its plant was rendered inoperable immediately after the early July flood, it came back on-line in late July. For the Johnson Wastewater Treatment Plant, this was the 6th flooding event at the plant since it was built in 1995. In the assessment that occurred by state and federal officials after the most recent flood,

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[16] Naishadham, Suman, Peterson, Brittany, Fassett, Carnille, "Rising Flood Risks Threaten Many Water and Sewage Treatment Plants Across the US," Vermont Public, https://www.vermontpublic.org/local-news/2023-08-10/ludlow-vermont-rising-flood-risks-threaten-many-water-and-sewage-treatment-plants-across-the-us

[17] https://apnews.com/article/climate-change-flood-risks-infrastructure-vermont-7bd953f513035468ee74f8f7c619bb8e] (picture captions: Joe Gaudiana, the Ludlow, VT. Chief Water and Sewer Operator, left, surveys damage with Elijah Lemieux, of the Vermont Rural Water Association, at the wastewater treatment plant following July flooding, Wednesday, Aug. 2, 2023, in Ludlow. (AP Photo/Charles Krpa))

[18] Robinson, Shaun, "Total Destruction: "Flooding Knocks Out Johnson's Wastewater Plant, Disrupts Operations Elsewhere" (July 18, 2023); https://vtdigger.org/2023/07/18/total-destruction-flooding-knocks-out-johnsons-wastewater-plant-disrupts-operations-elsewhere/

[19] Telephone conversation with Vermont Department of Conservation officials, Heather Collins and Michelle Kolb (September 25, 2023).

long-term recommendations ranged from more minor fixes (i.e., replacing the gravity line with a pump station and force main) to undertaking an assessment that would compare the cost of moving the facility against the already-significant cost of just repair and construction, estimated to be at least $2 million.[20] As the officials emphasized, short of relocating, or finding significant additional resources, for some of Vermont's impacted facilities, there are no easy fixes and future adaptations might mean preparing "to-go bags," and installing "redundant pipes," submersible pumps, waterproof electrical boxes or, in some cases, possibly building a second story on an existing plant.

Even more recently, in September 2023 the City of Leominster in central Massachusetts experienced a flash flooding event.[21] Previously, the city had identified a riverbank section of the North Nashua River, near the WWTS, that had eroded and was continuing to be eroded and was heading towards a buried sewer main. As detailed in the summary of work report,[22] "[l]eft unabated, the stream would likely carve a new path into the sewer line, potentially causing a break." To mitigate this potential problem, the city completed a riverbank stabilization project under FEMA's Hazard Mitigation Grant Program to protect the main sewer line that was identified as vulnerable to flooding and failure. That line was unimpacted by the recent flash flooding in September and the stabilization work is still intact while other infrastructure in the area suffered significant flood damages. In addition to illustrating the potential impacts of a recent flooding event on a WWTF, this example - of identifying a risk to increased flooding and consequent mitigation measure - exemplifies the process that EPA envisions for the Adaptation Plan.

EPA acknowledges and appreciates that many WWTSs and sewer systems are currently designed with some flood protections to combat the increasing frequency of major storm and flood events and the resulting impacts to wastewater treatment systems and sewer systems. To address the current and future risks associated with these more frequent and intense storms occuring in the region, EPA finds that the development of an Adaptation Plan is necessary in order to ensure the proper operation and maintenance of WWTSs and sewer systems.

B. Requirement to Develop an Adaptation Plan

EPA received a variety of comments regarding the requirements in the Permit to develop an Adaptation Plan (referred to as a "Major Storm and Flood Events Plan" in the Draft Permit). These comments range from general concerns about the clarity, development, timing and scope of the Adaptation Plan itself, to more specific concerns about particular permit terms.

While EPA believes the proposed permit language was set forth with reasonable clarity, in the Final Permit the three components of the Adaptation Plan have been revised and re-organized to define the requirements even more clearly. The goal of these changes is to simplify and better-

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[20] Johnson Village Wastewater Post July 2023 Flood Treatment Plant Assessment Lamoille County, Vermont, NPDES Permit Number Vermont 0100901 (August 9, 2023)

[21] Derrick Bryson Taylor and Johnny Diaz, "Massachusetts Cities Declare Emergency After 'Catastrophic' Flash Flooding" https://www.nytimes.com/2023/09/12/us/leominster-massachusetts-flash-flooding.html

[22] City of Leominster, North Nashua River Riverbank Stabilization Project: Summary of Work (prepared by GZA GeoEnvironmental, Inc.) (February 2023)

define the components of the required Adaptation Plan, discussed in more detail below, and to establish a standard of work that allows greater latitude for the Permittee to determine how to meet permit requirements (which includes allowing the Permittee to use qualifying prior assessments in satisfaction of some or all the Permit's Adaptation Plan components.)

To support the Permittees' development of an Adaptation Plan, EPA Region 1 has developed a companion document: *Recommended Procedures and Resources for the Development of Adaptation Plans* ("Recommended Procedures")[23] to assist owners and operators of wastewater treatment systems and/or sewer systems to develop adaptation plans that meet the requirements included in Region 1 NPDES permits. The document provides recommendations and procedures for the use of a free EPA tool developed specifically for water utilities. Permittees may use the recommended tool and the associated procedures or they may use other approaches providing comparable analyses, as discussed in more detail below, to satisfy permit requirements.

In the Final Permit the three components of the Adaptation Plan include the following (additional detail, including definitions of certain terms, is included in the Final Permit):

- Component #1: Requires the Permittee to develop and sign, within 24 months of the effective date of the permit, an identification of critical assets and related operations within the WWTS and/or sewer system which they own and/or operate that are most vulnerable to major storm and flood events under baseline and future conditions and to assess the ability of each to function properly in the event of major storm and flood events in terms of effluent flow, sewer flow, and discharges of pollutants;

- Component #2: Requires the Permittee to develop and sign, within 36 months of the effective date of the permit, an assessment of adaptive measures, and/or, if appropriate, the combination of adaptative measures that minimize the impact of future conditions on the critical assets and related operations of the WWTS and/or sewer system(s); and

- Component #3: Requires the Permittee to submit a summary of the work completed in Components #1 and #2 with a proposed schedule for implementation and maintenance of adaptive measures within 48 months of the effective date of the permit.

As described above, the final requirements of the Adaptation Plan have been revised to address a variety of concerns raised by commenters. EPA explains its rationale for specific revisions and definitions in more detail below. EPA notes that while there have been several organizational changes and other edits to further clarify the three components of the Adaptation Plan, the framework proposed in the Draft Permit is maintained.[24]

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[23] Available at: https://www.epa.gov/npdes-permits/npdes-water-permit-program-new-england

[24] The comments on the Draft Permit did not appear to raise substantial new questions on the Permit. 40 C.F.R. § 124.14(b). The commenters' critiques of the proposed permit requirements did not raise substantial new issues but rather, for example, question EPA's authority to impose the requirements, or express concern regarding particular timeframes included in the requirements. The changes made in response to these and other comments were foreseeable. *See In re Concord*, 16 E.A.D. 514, 532 (EAB 2014) ("[I]t was foreseeable that the Region might alter [a certain permit] limit in light of public comments questioning the Region's rationale for setting [that limit].") The comments did not result in EPA substantially changing the permit requirements, but rather prompted EPA to refine

- Commenters raised concerns about the ability of Permittees to implement all of the identified adaptive actions in the time frames set forth in the Draft Permit. EPA agrees with the concerns that were raised about the ability to implement all identified adaptive measures within those time frames and has, therefore, modified the Final Permit to require the Permittee to develop an implementation schedule itself rather than specify a particular schedule for implementation. EPA notes that the Final Permit also requires that the Permittee report annually on "any progress made toward implementation of adaptive measures." This leaves the Permittee free to evaluate other considerations when determining when and how to implement adaptive measures. EPA encourages Permittees to move forward with implementation actions that address the vulnerabilities identified as part of its Adaptation Plan in as timely a manner as possible and to prioritize addressing the most impactful vulnerabilities.[25]

- In an additional effort to clarify and simplify the Adaptation Plan requirements, the two previously separate wastewater treatment system and sewer system provisions have now been combined into one section in the Final Permit.

- Some commenters expressed that members of the regulated community already consider natural disasters and other emergencies as part of routine facilities planning. EPA acknowledges that in appropriate instances, prior or ongoing work completed by Permittees may satisfy some, or all, of the requirements to develop an Adaptation Plan as specified in the Final Permit. EPA is not opining at this time on which types of assessments will be found to meet permit terms as site-specific circumstances may dictate whether alternative approaches are suitable or not. Permittees who wish to comply with permit requirements through other means "must explain how its prior assessments specifically meet the requirements [of the] permit." Further, EPA has revised certain

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the requirements already proposed in the Draft Permit, as described in more detail below. *See In re Carlota Copper Company*, 11 E.A.D. 692, 730-731 (EAB 2004) (permit issuer reopened public comment period after comments received during the first comment period prompted the permit issuer to require, for the first time, site remediation and to authorize discharge from a new outfall.) Because the public already had an opportunity to comment on these proposed requirements during the public comment period, a second public comment period would not be appropriate. *See id.* at 729-730 ("A second public comment period… does not provide an opportunity to raise any new issues regarding the permit, but instead provides only an opportunity to submit comments on the issues that caused the reopening of the comment period."); 40 C.F.R. § 124.14(c) (Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening.)

[25] Commenters suggested that requiring implementation of the Adaptation Plan requirements was unreasonable since some mitigation measures might require regional planning and collaboration between surrounding communities. EPA agrees that there are many aspects involved in addressing adaptation planning and associated implementation measures, including regional considerations and that region-wide planning is appropriate. Permittees are encouraged to engage in regional planning and EPA understands this may impact proposed schedules for implementation measures. EPA expects, however, that for most Permittees there will be many implementation measures that do not require regional planning or collaboration. To the extent this is not the case, the Permittee may document its analysis supporting such a conclusion and base its implementation schedule accordingly. This does not negate the need or reasonableness for the Adaptation Plan requirement.

minimum standards (e.g., use of FEMA Flood Standards) to ensure any Adaptation Plan work does not interfere with accessing funding sources such as the SRF.[26]

Thus, the requirement in the Final Permit has been updated to allow for the use of previous work as follows:

> *Credit for Prior Assessment(s) Completed by Permittee [and/or Co-permittee(s)].* If the Permittee [and/or Co-permittee(s)] has [have] undertaken assessment(s) that were completed within 5 years of the effective date of this permit, or is [are] currently undertaking an assessment that address some or all of the Adaptation Plan components, such prior assessment(s) undertaken by the Permittee [and/or Co-permittee(s)] may be used (as long as the reporting time frames (set forth in Part I.C.1.a) and the signatory requirements (set forth in Part II.D.2 of this permit) are met) in satisfaction of some or all of these components, as long as the Permittee [and/or Co-permittee(s)] explains how its prior assessments specifically meet the requirements set forth in this permit and how the Permittee [and/or Co-permittee(s)] will address any permit requirements that have not been addressed in its prior or ongoing assessment(s).

- Commenters expressed concerns that the phrase "at a minimum, worst-case data" was unclear in the Draft Permit which required Permittees to look at 3 categories of data:

  1) the data generated by the 13 federal agencies that conduct or use research on global change that contributed to the latest National Climate Assessment produced by the U.S. Global Change Research Program (USGCRP);
  2) climate data generated by the Commonwealth of Massachusetts; and
  3) resiliency planning completed by the municipality in which a given facility is located.

  Using these sources, the Draft Permit required the Permittees to select projections relating to changes in precipitation, sea level rise, extreme weather events, coastal flooding, inland flooding, sewer flow and inflow and infiltration showing the worst-possible outcome. This data set was then to be used to determine vulnerabilities at the facility. This was the minimum requirement, but Permittees could supplement their analysis by using other worst-case data as available.

  After reviewing the comments received, EPA has determined it is more appropriate at this time to use terminology that is defined in and consistent with the federal flood standards, to ensure eligibility for federal funding and to specify the data acceptable for use when conducting an assessment of vulnerable assets. Therefore, to clarify the conditions that must be considered in a vulnerability assessment, EPA has removed the phrase "at a minimum, worst-case data" from the Final Permit and instead, the Final

[26] "Re-Instatement of Federal Flood Risk Management Standard for State Revolving Fund Programs," Thompkins, Anita Maria and Stein, Raffael to Water Division Directors (April, 2022) https://www.epa.gov/dwsrf/federal-flood-risk-management-standard-srf-programs

Permit requires that the Permittee evaluate asset vulnerability using baseline conditions and future conditions, as explained below.

The Final Permit defines baseline conditions as the 100-year flood based on historical records and future conditions as projected flood elevations using one of two approaches consistent with the federal flood standards:

a) Climate Informed Science Approach (CISA): The elevation and flood hazard area that result from using the best-available, actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate science. These shall include both short term (10-25 years forward-looking) and long term (25-70 years forward-looking) relative to the baseline conditions and must include projections of flooding due to major storm and flood events using federal, state and local data, where available;

b) Freeboard Value and 500-year floodplain Approach: The flood elevations that result from adding an additional 2 feet to the 100-year flood elevation for non-critical actions and by adding an additional 3 feet to the 100-year flood elevation for critical actions compared to the flood elevations that result from 500-year flood (the 0.2% - annual-chance flood) and selecting the higher of the two flood elevations.

This change in the Final Permit clearly defines what minimum conditions must be used to assess vulnerability under the Adaptation Plan, and EPA has provided tools and data references a Permittee may use to evaluate these conditions and meet the permit requirements. The flood elevations specified account for many of the storm and flood conditions that were listed in the Draft Permit; however, EPA notes that these data may not account for all potential instances of extreme precipitation. Currently, data sets or mapping tools that model changes to flood elevations in response to varying storm sizes are not readily available or simple to use. Therefore, EPA is not requiring facilities to identify or use such data in their analysis. However, EPA notes that there may be site-specific data available for use in a given municipality, and EPA encourages facilities to consider impacts from site-specific events for planning purposes if possible. One or more of the resources provided in the Recommended Procedures document, referenced in the Final Permit, may also account for impacts of extreme precipitation to an extent that is useful to facilities.

- In response to concerns expressed in comments, EPA has removed the requirement for an iterative planning process with re-evaluations "as data sources used for such evaluations are revised, or generated." EPA agrees that this requirement could create the constant need to check for new data, which would be costly and was not EPA's intent. Instead, the Final Permit has been updated to require evaluating the vulnerability of assets once during the permit term (during the development of the Adaptation Plan). Additional revision of the Adaptation Plan during the permit term would only be required during the permit term if there has been a significant change to the infrastructure of the system to update the description of the assets removed or updated, to incorporate any new assets

into the documentation, and describe any effects these changes have on the asset and/or system vulnerability. Specifically, the Final Permit states:

> The Adaptation Plan shall be revised if on- or off-site structures are added, removed, or otherwise significantly changed in any way that will impact the vulnerability of the WWTS or sewer system.

- EPA agrees with concerns expressed by commenters regarding the security of documents generated in the adaptation planning process and has made the following revisions to the submission requirements.

    - EPA has removed the requirement to make a GIS system map publicly available online. EPA agrees with commenters that this requirement could create security concerns and other hardships for the regulated community. The Permittee is still required by Part I.C.2.d. of the Permit to maintain such a map, but the map is not required to be in a GIS format, nor is it required to be posted online.
    - Furthermore, in response to comments about security-related issues, EPA is now requiring only that the Permittee submit to EPA an Implementation and Maintenance Schedule under Component 3 of the Adaptation Plan. (In the Draft Permit, EPA required that the Permittee submit the entire Adaptation Plan to EPA.)

      Specifically, as set forth in the Final Permit, the Permittee shall, as part of the requirement to submit an Implementation and Maintenance Schedule:

      > summarize the general types of significant risks [footnote omitted] identified in Component 1, including the methodology and data used to derive future conditions [footnote omitted] used in the analysis and describe the adaptive measures taken (or planned) to minimize those risks from the impact of major storm and flood events for each of the critical assets and related operations of the WWTS and the sewer system and how those adaptive measures will be maintained, including the rationale for either implementing or not implementing each adaptive measure that was assessed and an evaluation of how each adaptive measure taken (or planned) will be funded.

      The Final Permit language notes in reference to the requirement to summarize "significant risks," that "[i]n light of security concerns posed by the public release of information regarding vulnerabilities to wastewater infrastructure, the Permittee shall provide information only at a level of generality that indicates the overall nature of the vulnerability but omitting specific information regarding such vulnerability that could pose a security risk."

      Although this revision has narrowed the scope of documentation required to be submitted to EPA, the Final Permit also clarifies that the Permittee must still have clearly documented the work completed under Component 1 and 2 and keep that

documentation on file and available for inspection or review by EPA upon request.

- Regarding timing, EPA agrees with the comments that 12-months may not be sufficient time to complete the Adaptation Plan, therefore, the Final Permit has been revised to allow additional time to complete the full Adaptation Plan. In the Final Permit, Component 1 is to be completed within 24 months of the effective date of the permit, Component 2 is to be completed within 36 months of the effective date of the permit, and Component 3 is due within 48 months of the effective date of the permit. EPA considers that this change will allow adequate time to initiate the necessary funding and procurement processes (which EPA understands must line-up with local requirements which can take place over many months or even years) in order to develop the plans (either in-house or through professional engineering services). EPA also considers this additional time will alleviate the impact to other ongoing municipal projects.

- Regarding annual reporting, and concerns that the requirements that such annual reports were excessive, EPA has modified this requirement and will now require a report "for the prior calendar year that documents any progress made toward implementation of adaptive measures, and any changes to the WWTS or other assets that may impact the current risk assessment." The first of those reports is now due on March 31 following the submission of Component #1 of the Adaptation Report. One commenter requested a 5-year reporting requirement rather than an annual reporting requirement. EPA has maintained the annual requirement. As described elsewhere in this General Response, flood and major storm events are a significant threat to water quality. An annual reporting requirement is therefore appropriate to facilitate Adaptation Planning and, ideally, the implementation of an Adaptation Plan occurring as promptly and as efficiently as possible.

- Regarding the cost of developing the Adaptation Plan, there are costs and other resources that Permittees must allocate to comply with all permit requirements. EPA considers proper operation and maintenance of the WWTS as well as the collection system to include addressing major storm and flood events that would impair operation of the system. EPA acknowledges that the Permittee will incur costs and other potential resource expenditures to develop a plan related to these events but considers these expenditures to be necessary in order to prevent impacts during such events (e.g., bypass, upset or failure of the WWTS, overflow, or increased inflow and infiltration in the sewer system, and discharges of pollutants that exceed effluent limits), which would adversely affect human health or the environment.

  However, EPA appreciates the regulated community's concerns regarding costs and has taken the commenter's concern – that the Adaptation Plan requirements have "significant cost implications" – into consideration and has accordingly made changes to the permit as described below.

  1. In order to minimize costs and provide additional clarity to Permittees, EPA has developed a companion document, *Recommended Procedures and Resources for the Development of Adaptation Plans for Wastewater Treatment Systems and/or Sewer*

Systems, ("Recommended Procedures"), which a Permittee could elect to use to guide it through development of the Adaptation Plan. The document instructs Permittees on the use of EPA's CREAT tool, which is free to use by Permittees and will help Permittees navigate through much of the analysis needed to develop an Adaptation Plan.[27] It is EPA's intention that a Permittee could use these tools to develop an Adaptation Plan in an effort to reduce costs and possibly to eliminate or reduce the need to hire external contractors.

2. EPA has removed the requirement that a "qualified person" conduct the assessment work, since this Draft Permit term created the misimpression that an outside contractor would be required to perform the work necessary to develop an Adaptation Plan. Rather, it is EPA's expectation that a person knowledgeable and familiar with the Permittee's wastewater treatment system and/or sewer system undertake the assessments necessary to develop a meaningful and useful Adaptation Plan.

3. The provision of the Draft Permit that required that the plan be revised "as data sources used for such evaluations are revised or generated," has been removed in the Final Permit.

4. A provision has been added to the Final Permit that allows credit for prior work to eliminate potentially costly duplication of efforts. Specifically, the new language says in Part I.C.1.b:

> Credit for Prior Assessment(s) Completed by Permittee or Co-permittee. If the Permittee [and/or Co-permittee(s)] has [have] undertaken assessment(s) that were completed within 5 years of the effective date of this permit, or is [are] currently undertaking an assessment that address some or all of the Adaptation Plan components, such prior assessment(s) undertaken by the Permittee [and/or Co-permittee(s)] may be used (as long as the reporting time frames (set forth in Part I.C.1.a) and the signatory requirements (set forth in Part II.D.2 of this permit) are met) in satisfaction of some or all of these components, as long as the Permittee [and/or Co-permittee(s)] explains how its prior assessments specifically meet the requirements set forth in this permit and how the Permittee [and/or Co-permittee(s)] will address any permit requirements that have not been addressed in its prior or ongoing assessment(s).

It is EPA's intention to provide Permittees with technical assistance for the development of the Adaptation Plan. EPA has many on-line training tools, [28] some of which have been

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[27] As noted by at least one commenter, the guidance documents and risk assessment tools developed to support the use of this tool, "also consider a more reasonable shorter planning horizon, which would allow for a more realistic capital planning process. See MWRA Comments on Adaptation Plan requirements of Draft Permit; see also, NACWA, Climate Adaptation and Resiliency (listing CREAT tool, along with other resources, as examples of how "clean water agencies are innovating in energy efficiency and energy generation, water reuse, green infrastructure and watershed-based approaches") https://www.nacwa.org/advocacy-analysis/campaigns/climate-adaptation-resiliency

[28] https://www.epa.gov/crwu/training-and-engagement-center; see also, the Resources Section in the Recommended Procedures for additional resources that Permittees might find useful.

utilized by New England WWTSs[29] and also plans (in accordance with available funding and agency priorities) to offer: a New England-based virtual workshop training series for WWTS operators and others on the use of the CREAT tool which EPA expects will commence in early 2024 (which will be recorded to maximize its utility for those who may want to access the information at a later date); in-person technical assistance sometime in mid- 2024 and telephone assistance on the use of the CREAT tool. In recommending Permittees use this tool and by providing procedures for using it, EPA hopes to both enable Permittees to develop robust Adaptation Plans themselves, but also to reduce the costs, including the costs associated with outside contractors.

Additionally, EPA notes that there may be federal, state or local funding sources available to assist entities with adaptation planning.[30]

- With regards to the cost of implementing adaptation measures, the selection and deadlines for implementing specific adaptation measures are not included as requirements in the permit since those will only be known after the completion of the Adaptation Plan. EPA expects that the Permittee will begin implementation of those measures in the coming years. However, since the Permittee will be setting the prioritizations and scheduling for implementing the measures based on their own risks and vulnerabilities to major storm and flood events, they may incorporate affordability and funding availability into their considerations.

EPA notes, that in developing the Adaptation Plan, the Permittee may, as part of the process, be comparing the potential economic costs of the baseline condition, or "no action alternative," with those of possible adaptation measures, under current and predicted risks of major storm and flood events. This option is available in the use of the adaptation planning approach as outlined in the companion document to this Final Permit entitled *Recommended Procedures and Resources for the Development of Adaptation Plans for Wastewater Treatment Systems and/or Sewer Systems.* Depending on site-specific circumstances, the Permittee may find that the cost of not implementing adaptation measures is greater than the cost of implementing them.

C. Legal Authority

The Adaptation Plan permit conditions are necessary to further the overarching goal of the CWA[31] "to restore and maintain the chemical, physical, and biological integrity of the Nation's

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[29] See https://toolkit.climate.gov/sites/default/files/Manchester-by-the-Sea_March_2016.pdf;]; see also, the Resources Section of the Recommended Procedures document for more New England case studies and other useful resources.

[30] EPA included a link to EPA's website for Federal Funding for Water and Wastewater Utilities in National Disasters (Fed FUNDS). The website, while no longer listed in the Final Permit can be accessed at: https://www.epa.gov/fedfunds. Potential resources may also be available through the State of Massachusetts.

[31] Congress has recently expressly affirmed that natural hazard adaptation measures for POTWs appropriately fall within the scope of the CWA: Congress added section 223 to the CWA via the Infrastructure Investment and Jobs Act, creating a grant program to support, *inter alia*, "the modification or relocation of an existing publicly owned

waters" and derive from the same authorities as all other standard operation and maintenance requirements. CWA § 101(a), 40 C.F.R. §§ 122.41(d), (e), (n). The Adaptation Plan requirements are an iterative update to EPA's standard O&M permit provisions and intend to address serious and increasingly prevalent threats to Permittees' compliance with permit effluent limitations. As illustrated by the recent examples detailed in Section A, major storm and flood events can gravely impact discharges from WWTSs and thus water quality. That is, plant and/or sewer system failure due to storms, increased precipitation/floods, storm surge, and sea level rise can and do lead to bypasses, upsets, and violations of some or all of the permit limits, including water quality-based limits and limits based on secondary treatment standards. The Adaptation Plan is designed to reduce and/or eliminate noncompliant discharges that result from impacts of major storm or flood events through advanced planning and adaptation measures and is authorized by both EPA regulations and the CWA.

A comment expressed concerns that the issues caused by major storm and flood events must be addressed at a community- or region-wide level, not just by the Permittee, and that such wide scale action is beyond the scope of an NPDES permit proceeding. EPA recognizes that larger scale planning may be necessary to address some issues and agrees that requiring the same would be beyond the scope of this NPDES permit. This NPDES permit does not intend to address all issues caused by major storm and flood events. To the contrary, the Adaptation Plan O&M requirements intend to address one specific issue that EPA has witnessed in New England, as described in Section A: the operability of the WWTS and/or sewer system during and after major storm and flood events. This issue is appropriate for an NPDES permit because it is central to the Permittee's compliance with the Permit's effluent limitations and other Permit conditions, and thus central to EPA's obligation to issue permits that assure compliance with Water Quality Standards and other applicable laws. For the reasons described in this Section, EPA is well within its CWA-based authority to impose the Adaptation Plan requirements.

EPA's O&M regulations authorize EPA to impose the Adaptation Plan requirement. 40 C.F.R. § 122.41(e) ("Proper operation and maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit.") Proper operation and maintenance of the permitted facilities and systems inherently includes adaptation planning. As illustrated in the examples in Section A, if a WWTS is unable to operate properly as designed due to impacts from a major storm or flood event, the discharge of pollutants in violation of both its permit and applicable water quality standards is highly likely to occur and with increasing frequency. In other words, the Permittee cannot satisfy its obligation to operate properly "at all times" if it cannot do so during and after major storms or flooding events. The new Adaptation Plan requirements are an iterative extension of the previous permit's requirements that "The permittee will maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure."[32] Major storm and flood events represent an increasing cause of WWTS

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treatment works, conveyance, or discharge system component that is at risk of being significantly impaired or damaged by a natural hazard[ ]." Pub. L. 117-58, 135 Stat. 1162 (codified at 33 U.S.C. § 1302a(c)(4))(2021).

[32] NPDES Permit No. MA0101630 issued to City of Holyoke, Oct. 25, 2016 (available at: https://www3.epa.gov/region1/npdes/permits/2016/finalma0101630permit.pdf)

malfunctions and failures and thus EPA added the Adaptation Plan requirements to the O&M requirements to more specifically address this issue.

EPA is well within its CWA-based authority to include these permit conditions which are necessary to reduce the frequency or likelihood of bypass or upset and otherwise achieve compliance with the permit's effluent limits, and thus also assure compliance with water quality standards and other CWA requirements. CWA § 402(a)(2) ("[EPA] shall prescribe conditions for [NPDES] permits to assure compliance with the [applicable CWA] requirements…as he deems appropriate."); CWA §§ 301(b)(1)(C), 401(a)(1)-(2); *see also* 40 C.F.R. § 122.4(d) ("No permit may be issued… When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States"); *See also* 40 C.F.R. § 122.44(d)(1). The provisions are reasonable measures rooted in the permitting requirements to properly operate and maintain all facilities and the duty to take all reasonable steps to minimize or prevent any discharge in violation of the permit. 40 C.F.R. § 122.41(d), (e).

The Agency relied on the same CWA-based authority when it promulgated the O&M regulations:

> Many commenters expressed doubt whether EPA is legally authorized to require proper operation and maintenance of facilities. This requirement is clearly authorized for NPDES permittees by section 402(a)(2) of CWA which requires the Administrator to prescribe permit conditions which will assure compliance with the requirements of CWA section 402(a)(1).

45 Fed. Reg. 33290, 33303-04 (May 19, 1980). In 1980 and now, the proper operation and maintenance of a facility – including the Adaptation Plan requirements – effectuates the permit limits on all addressed pollutants and protects all applicable water quality standards, as they assure that such limits will be met, even in times of major storms or during flood events. CWA § 402(a)(2). It is well-established that EPA may include specific permit conditions that ensure the preconditions or assumptions underlying EPA's pollutant effluent flow calculations remain constant, thus ensuring the permit, as a whole, assures compliance with WQS and other applicable CWA requirements. *See In re: City of Lowell,* 2020 WL 3629979 at *35,18 E.A.D. 115, 156 (EAB 2020) (affirming effluent flow limit as a proper exercise of the Agency's 40 C.F.R. § 122.41(e) authority in part on the basis that the permit's pollutant effluent limits were calculated based on a presumed maximum wastewater effluent discharge from the facility, and thus "If flow limits exceed the assumed maximum flow, … then the Region may have erroneously concluded that a pollutant did not have a reasonable potential to cause or contribute to an exceedance of water quality standards or that the permit's pollutant effluent limits assure compliance with Massachusetts' water quality standards.") Likewise, The Adaptive Plan O&M requirements ensure the basic, necessary preconditions (i.e., the plant's operability) to compliance with the permit's effluent limits and other requirements of the CWA. Given the importance of WWTS and sewer system operability to compliance with this NPDES permit, it is not unreasonable for EPA to impose the Adaptation Plan O&M requirements. *C.f. In re Avon Custom Mixing Services, Inc.*, 17 E.A.D. 700, 709 (EAB 2002) ("Given the importance of monitoring to the integrity of NPDES permits, and the broad authority the CWA confers on the Region to impose monitoring requirements in NPDES permits, it does not strike us as

unreasonable that the Region has decided to include new monitoring requirements in the reissued permit.")

The EAB has affirmed the Agency's authority to require the preparation and submission of a plan as part of the Operation & Maintenance requirements of an NPDES permit. *In Re City of Moscow, Idaho*, 10 E.A.D. 135, 169-172 (EAB 2001) (affirming O&M permit provision that required development and submission of a quality assurance project plan,"[t]he primary purpose of [which] shall be to assist in planning for the collection and analysis of samples in support of the permit…"[33] under the O&M regulations, stating "it seems plain that the CWA and its implementing regulations authorize the Region to include permit requirements like the QAPP here in conjunction with the ultimate goal of assuring compliance with the CWA."). Like the O&M planning requirement in *Moscow,* the primary purpose of the Adaptation Plan in this permit is to assist in planning for compliance with the permit – in this instance, by ensuring the facility remains operable even during flooding or other major storm events – and the ultimate goal of the requirement is to assure compliance with the CWA.

40 C.F.R. § 122.41(d) also authorizes EPA to impose the Adaptation Plan requirement. ("Duty to mitigate. The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.") It is a reasonable step for EPA to require a Permittee to create an Adaptation Plan to minimize facility disruptions during major storm and flood events. For example, if a Permittee identifies that an asset critical to its WWTS is extremely vulnerable to a major storm and that loss of the asset would result in the inoperability of the WWTS and thus discharges in violation of permit limits, then mitigating those risks reasonably minimizes or prevents harmful discharges in violation of the permit.

EPA also has broad authority for data and information collection, reporting, and "such other requirements as [the delegated permit authority] deems appropriate" to carry out the objectives of the Act." CWA § 402(a)(2). *See also In re Moscow*, 10 E.A.D. at 171. Components 1 and 2 of the Adaptation Plan require the Permittee to collect and report to EPA data and information that are appropriate to carry out the objectives of the CWA. This information and data will allow the Permittee to identify assets which are vulnerable to flooding and adaptive measures appropriate to address those vulnerabilities. As described elsewhere in this General Response, facility vulnerabilities threaten compliance with permit requirements and thus CWA objectives. Conversely, information about appropriate adaptive measures will facilitate compliance with both.

Comments stated it was inappropriate to impose provisions that require consideration of discharges occurring 100 years from now. First, EPA notes the changes made to the permit with regard to these provisions. See Part B of the General Response defining "future conditions". Second, EPA notes that although the CWA limits the terms of NPDES permits to five years, CWA § 402(b)(1)(B), such a limitation does not logically constrain the permitting authority from requiring the Permittee to consider future conditions beyond the five-year term. Third, EPA

[33] NPDES Permit issued to City of Moscow, Idaho, Part I.E (March 12, 1999) (available at: https://www2.deq.idaho.gov/admin/LEIA/api/document/download/15509)

expects Permittees to fully comply with the Adaptation Plan provision within the five-year term of the permit, meaning it does not impose any obligations on the Permittee beyond the five-year permit term. Fourth, the comments provide no authority for the proposition that a five-year permit term limitation was intended to prevent permit authorities from considering time-frames greater than five years in permitting. The lack of authority is not surprising as the concept of permit terms that require long-term planning or timeframes greater than five years is a familiar and accepted one. One directly relevant example for WWTSs are Combined Sewer Overflow Long-Term Control Plans (LTCPs). The CSO Policy, 59 Fed. Reg. 18688 (April 19, 1994), which Congress expressly incorporated directly into the CWA at § 402(q), requires the development of LTCPs to ultimately come into compliance with the Act, recognizing that such schedules will (and have) in many instances span multiple permit terms. That Congress directly amended the CWA to require compliance with the CSO Policy, including its long-term permitting approaches, demonstrates that the Act does not constrain permitting authorities from considering timeframes outside of the five-year permit term. Another example of permissible permit timeframes that extend beyond the five-year permit term are compliance schedules, which may go beyond the expiration date of the permit if consistent with applicable state law. *See In Re Moscow,* 10 E.A.D. at 153 ("...a Region's authority to provide for compliance schedules in EPA-issued permits is limited to those circumstances in which the State's water quality standards or its implementing regulations 'can be fairly construed as authorizing a schedule of compliance.'") (citations omitted). The WWTS Adaptation Plan reasonably also requires *consideration* of long-term horizons as the planning and actions needed to address increasing major storms and flood events will be in many instances long-term as well.

Further, EPA does not agree that the expected life or design life alone is the appropriate recurrence interval to consider future risks. Namely, while a particular facility can be designed initially for an expected period of operation and the design storm at a given point in time, material changes often occur over time to operate and maintain a facility, thus extending its design life, and with the impacts of increased severity and frequency of major storm and flood events, the original design storm may no longer represent likely discharge conditions. EPA asserts that a forward-looking evaluation of the risks to a facility relative to its current operational state is important to selection and implementation of the control measures necessary to minimize discharges that result from impacts of major storm and flood events.

One commenter described the Adaptation Plan requirement as an unfunded mandate. EPA interprets the reference to "unfunded mandate" as a reference to the requirements of the Unfunded Mandate Reform Act of 1995 (UMRA), which is inapplicable to this permitting action. The UMRA applies to rulemaking, and not individual NPDES permit decisions. 2 U.S.C. § 1555 ("... for purposes of this subchapter the term 'Federal mandate' means any provision in **statute or regulation or any Federal court ruling** that imposes an enforceable duty upon State, local, or tribal governments..." (emphasis added); 2 U.S.C. § 1501(7) (the purpose of the UMRA is, *inter alia,* "to assist Federal agencies in their consideration of proposed **regulations** affecting State, local, and tribal governments...") (emphasis added)[34]; *See also* H.R. Rep. No. 10476, at 39

[34] *See also* 2 U.S.C. § 1532 ("... before promulgating any **general notice of proposed rulemaking** that is likely to result in promulgation of any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more... in any 1 year,

(1995), reprinted in 1995 U.S.C.C.A.N. 64 (Congress contemplated that rules subject to UMRA would "follow the requirements of section 553 of title 5, United States Code [Administrative Procedure Act] * * * ."), and NPDES permit proceedings are not subject to the requirements of that section.); *In re City of Blackfoot Wastewater Treatment Facility*, NPDES Appeal No. 00-32, at *18-19 (EAB September 17, 2001) (Order Denying Petition for Review)[35](denying in part because "The Unfunded Mandate Reform Act of 1995 is Inapplicable to NPDES Permit Decisions", finding that "Facility-specific NPDES permits… are not regulations, but rather are licenses.".)

Commenters suggest that the Adaptation Plan requirements should be removed from the permit because other avenues of resiliency planning would be more appropriate. EPA acknowledges that there are many possible approaches and that there are other programs that require resiliency planning. However, because adaptation planning is a critical step in complying with the permit's effluent limitations, EPA has determined that it is appropriate to include the Adaptation Plan requirements in the Permit itself even if similar requirements also derive from other obligations. Major storm and flood events are of urgent concern, and EPA does not believe it would be sufficient to rely entirely on non-Permit obligations to address these threats to the proper operation and maintenance of WWTSs and/or sewer systems, especially because not all Permittees may otherwise be obligated to engage in adaptation planning, or may not be required to do so at this time. EPA has determined that planning for major storm and flood events must be done by all facilities now to avoid negative impacts. In recognition of the fact that Permittees may complete similar assessments to satisfy other obligations, the Final Permit allows the Permittee to use qualifying assessments done for other programs or obligations to satisfy some or all of the components of the Adaptation Plan requirements. EPA considers its approach to be appropriate and reasonable to ensure consistent operation and maintenance of permitted facilities. Therefore, EPA will require Adaptation Plans be developed under NPDES permits for all wastewater treatment plants in Massachusetts. *Cf. In re Springfield Water and Sewer Commission*, 18 E.A.D. 430, 475 (EAB 2020) (finding no clear error "when a permitting authority agrees to a permit applicant's request for relief but decides on a different vehicle than the one proposed to provide that relief.")

III. Responses to Comments

Comments are reproduced below as received; they have not been edited.

A. Comments from Carl Rossi, Director, Director of Public Works, City of Holyoke:

Comment 1

The City of Holyoke is in receipt of the above referenced draft permit and appreciates the opportunity to provide the following comments based on our review of the draft permit.

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and before promulgating **any final rule for which a general notice of proposed rulemaking was published**, the agency shall…") (emphases added).

[35] Order available online at: https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/Published%20and%20Unpublished%20Decisions/FDA156ABE18B7BD385257069005F7D3B/$File/blackfoot.pdf

The City of Holyoke recently entered into a Final Consent Decree[1] on March 23, 2023, with the USEPA and Commonwealth of Massachusetts. This Decree requires the expenditure of $27 million over a 10 and ½ year period. Appendix A of the Consent Decree (Section 8 and 9). outlines the extent of Holyoke's 'Disadvantaged Community' status and the ratepayer's duress in completing the requirements of the Consent Decree.

A review of the EPA's 'Environmental Justice' Screening Tool[2] for Holyoke outlines how disadvantaged the community scores. Within the Environmental Justice Index, Holyoke scores in the 80th percentile and is often higher in almost all key indices. The ability for ratepayers to take on more costs is currently at the maximum affordability as outlined in Section 8, Affordability Analysis, of Appendix A of the Consent Decree.

[1] Final Consent Decree of U.S., et al. v. City of Holyoke, Massachusetts (justice.gov)
[2] EJScreen (epa.gov)

Response 1

EPA acknowledges this comment.

Comment 2

Page 3 of 35, Effluent Limitations and Monitoring Requirements:

a. **Total Aluminum, Copper, and Lead**. It is unclear as to why copper and lead are limited since the discharge does not have reasonable potential to violate the applicable water quality standards. (see Attachment A). The Aluminum Water Quality limit is set at 87 ug/1 which the EPA used as the WQ maximum exposure receiving water concentration. The Aluminum Calculator (Version 2.0) is the appropriate criteria to use in this calculation. Appendix B of the Draft Permit includes both the 87 ug/1 limitation and the Aluminum Calculator Chronic Concentration of 290 ug/1. EPA adopted the Aluminum Calculator in 2018 and the State of Massachusetts also approved this application on November 11, 2021[3]. As outlined in Appendix A, the Aluminum Criteria value would be 27.22% of the WO criteria and therefore there would be 'No Reasonable Potential' to violate WQ."

   It should also be noted that there are no technology-based effluent standards for these metals that are applicable to POTWs. Instead, they are responsible for regulating their industrial users to prevent metals and toxics from causing treatment inhibition, problems with biosolids disposal, and protecting receiving stream water quality. As Holyoke's data suggest, they are adequately limiting these industries. By setting the effluent discharge limit at the 95th percentile of effluent discharge concentrations, EPA seems to be applying technology-based limits for these parameters. EPA does not comply with the reasonable potential calculation as outlined in Appendix B of the draft.

   EPA notes in the fact sheet, "As shown, the 95th percentile of the effluent data (Ce) for each metal results in a downstream concentration (Cd) significantly below the relevant criterion." This is the very definition of "no reasonable potential to cause or contribute to violations of water quality standards.

With no regulatory basis for technology-based effluent limits and no reasonable potential for the discharge to cause or contribute to violations of the instream standards for aluminum copper and lead, Holyoke respectfully requests that effluent limitations for these parameters be removed from the permit.

[3] download (mass.gov)

[EPA note: Attachments A and B were reviewed but not reproduced here.]

Response 2

The comment asserts that there is no reasonable potential for the discharge to violate water quality standards for copper, lead and aluminum and asserts that the limits for copper, lead and aluminum should be removed. EPA disagrees with this comment. EPA clarifies that for pollutants with an existing water quality-based effluent limit (WQBEL), the analysis described in 40 CFR § 122.44(d)(1)(i) has already been conducted in a previous permitting action demonstrating that there is reasonable potential to cause or contribute to an excursion of water quality standards (WQS). Given that Holyoke's 2016 Permit already contains WQBELs for copper, lead and aluminum based on the prior analysis and continue to be discharged from the facility, EPA has determined that there is still reasonable potential for the discharge of copper, lead and aluminum to cause or contribute to an excursion of WQS in the Connecticut River.

Further, as noted in the Fact Sheet at 38-39, EPA evaluated whether any of the limits could be made less stringent based on all available information. EPA concluded that the copper and lead limits could be made less stringent but the aluminum limit could not change because the discharge is already in compliance with the aluminum limit. See Fact Sheet at 38-39 for rationale. Contrary to the comment, EPA did not apply the prior aluminum criterion of 87 µg/L in this permit reissuance; rather, the existing limit of 87 µg/L was carried forward. EPA notes that further relaxation of these limits may be allowable but would require an antidegradation review to ensure that any such increase in these pollutants does not use more than the allowable percentage of the remaining assimilative capacity with respect to each metal. The Permittee may contact MassDEP to discuss the possibility of an antidegradation review. If an antidegradation review is completed, the Permittee may request a permit modification to incorporate any allowable changes in the permit limits.

Comment 3

b. **Total Nitrogen (TN)** The permit includes a rolling average loading limit for TN of 730 ppd based on a design flow of 17.5 mgd and an effluent concentration 5 mg/l (allocation from Long Island Sound TMDL).

As noted in the Consent Decree referenced earlier, Appendix A indicates the cost for Nitrogen treatment would be $137 million[4] as outlined in a MassDEP study. EPA indicates that future Nitrogen trading credits are a goal for basin-wide compliance with nitrogen loading to LIS.

Environmental Justice calls for fair and equitable treatment for disadvantaged communities. Allocating loading to treatment plants based on size, rather than ability to pay, is contrary to these very principles. The fair and equitable approach would be a daily loading limit based on a single concentration. The application of a limit based on a 5 mg/I effluent concentration will result in a great financial burden on the City of Holyoke.

In the Fact Sheet EPA notes that Holyoke's average TN loading is below the proposed limit of 730 ppd in four out of the five year rolling averages. In 2017 the annual rolling average was 748 ppd.

Within this permit, EPA does not propose a compliance schedule for meeting the effluent limit. However, Holyoke operates at a level approximately 40% lower than the design flow of 17.5 mgd. To estimate the total nitrogen discharge from the Water Pollution Control Facility ("WPCF") operating at the design flow, Holyoke's Consultant, Hazen and Sawyer ("Hazen"), conducted a very preliminary BioWin modeling run at the design flow as shown in the table below:

Parameter	**2021 Ave Flow (7.2 mgd) Measured**	**Design Flow (17.5 mgd) Modeled**
Effluent TN, mg/l	7.1	14.4
Effluent TN, ppd	427	2,099

The City of Holyoke is concerned that conditions could change in the future making the proposed TN limit difficult to meet. Such changes could include the gain or loss of industrial dischargers, or demographic shifts. Because of the uncertainty of meeting the limit in the future and the great financial burden that would be placed on the City by application of the limit, the City of Holyoke respectfully requests that EPA defer implementation of the total nitrogen limit until the next permit cycle. In the interim the City of Holyoke will continue to optimize the WPCF for nutrient removal.

[4] This estimated cost was developed as part of a regional study completed in 2008. The Holyoke WPCF upgrade cost, adjusted to a current day value using the October 2022 ENR CCI is approximately $159 million.

Response 3

EPA acknowledges the financial challenges associated with compliance with the Clean Water Act. As noted in the comment, EPA's permitting approach includes equitable treatment of facilities based on size. This approach was chosen because larger facilities are able to achieve greater nitrogen reductions at a lower cost per pound of nitrogen. In the case of Holyoke, EPA understands the unique financial challenges. However, EPA also highlights that the facility is already in compliance with the proposed TN limit. EPA expects that future compliance in the near term will be achievable through optimization and without the need for a major facility upgrade. The comment suggests that compliance in the long-term may be challenging if the facility is discharging at design flow. However, the comment does not provide any detail on projected flow increases that may or may not occur in the coming years. If the community does experience a substantial flow increase, this would presumably be due to a corresponding substantial increase in ratepayers which would spread the cost of a facility upgrade limiting the impact on the existing ratepayers.

Regarding the request to defer implementation of this TN limit to the next permit cycle, EPA notes that each permit reissuance must ensure compliance with all water quality standards. Given that this TN limit is necessary to achieve standards in Long Island Sound, EPA is unable to defer this requirement.

EPA notes that a compliance schedule in a permit must comply with 40 CFR § 122.47(a) and (a)(1) which indicates that a permitting authority must make a reasonable determination that a schedule of compliance is "appropriate" and that the schedule proposed requires compliance "as soon as possible." Given that the facility is already discharging below the proposed limit, EPA asserts that a compliance schedule it not "appropriate" and compliance "as soon as possible" would be immediate.

The comment references one year (2017) when the average load was 748 lb/day, which is above the proposed limit of 730 lb/day. EPA agrees that Appendix C of the Fact Sheet lists loads from all facilities throughout the watershed, including Holyoke, from 2014 through 2018 and does show that the 2017 load was above the proposed limit. However, the most recent 5-year review period used in the development of this permit was from October 2017 through September 2022. During this recent 5-year period, the maximum rolling annual average was 668 lb/day, as noted on page 33 of the Fact Sheet. Given that the most recent 5 years of data are all below the proposed limit, EPA determined that a compliance schedule would not be appropriate.

The commenter also notes that the facility operates approximately 40% below the design flow and that it could be challenging to meet the limit if there are future increases in flow and corresponding nitrogen load. If significant increases in flow and nitrogen load are expected in the future, EPA expects that the Permittee could plan ahead to accommodate such future changes to ensure the facility maintains compliance with the nitrogen limit under all potential flows. Holyoke has provided no evidence supporting the notion that increases in flow due to new industries or demographic shifts would be so sudden as to preclude time to plan for and implement any facility upgrade necessary to continue to meet the total nitrogen limit.

Comment 4

Page 9 of 35, Part 1:A does not list a first (1.) condition. Page 8 of 35 mentions Part 1.A.1 in item 14 and again in item 15. The 1st condition in the draft permit should reference these two previously numbered bullets for continuity.

Response 4

EPA clarifies that Part I.A.1 of the permit is the table of effluent limitations and monitoring requirements on pages 3 through 5 of the permit. Items 14 and 15 on page 8 are actually footnotes that reference parts of this table. Part I.A continues with Part I.A.2 on page 9.

Comment 5

Page 10 of 35, Part C. Operation and Maintenance of the Treatment and Control Facilities. The basis for these requirements is the "Duty to Mitigate" and "Proper Operation and

Maintenance" Standard Conditions of 40 CFR Part 122.41(d) and (e). The "Duty to Mitigate" specifically refers to all reasonable steps to minimize discharges that would adversely affect human health or the environment.

1. *Wastewater Treatment Facility*

a. **WWTF Major Storm and Flood Events Plan**. The permit requires that this plan be submitted within 12 months of the effective date of the permit. However, Holyoke has an existing High Flow Management Plan (HFMP) which for the WPCF worked well during the last permit cycle and should be sufficient for the current permit cycle concerning climate challenges. Holyoke proposes to update the HFMP by incorporating the items listed in the draft permit below:

(e) Catalog emergency resources used during a major storm or flood event
(f) Develop emergency response plans.
(g) Establish contracts for backup supplies of critical chemicals.
(h) Establish mutual aid agreements with neighboring utilities.
(i) Integrate long-term risks into capital improvement plans.
(j) Participate in community planning and regional collaborations.
(k) Conduct staff training for implementing your emergency procedures at regular Intervals

It should also be noted that a Vulnerability Evaluation was included in the WPCF's Asset Management Plan. Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 1.a. WWTF Major Storm and Flood Events Plan that has already been done by Holyoke.

Response 5

EPA commends the city for already taking steps to evaluate vulnerabilities of the System and notes that the Final Permit Adaptation Plan requirements allow the Permittee to use certain prior assessments to satisfy the Adaptation Plan requirements. See the Final Permit Part I.C.1.b. for more details and the General Response.

Comment 6

2. Sewer System

Items a-e(1) are similar to CMOM requirements and Collection System Operation and Maintenance Plans found in NPDES permits issued by EPA Region 1 as well as those issued by delegated state NPDES authorities. Holyoke has had a CMOM program since 2012. Pursuant to the currently effective permit, Holyoke submitted the Full Collection System Operation and Maintenance Plan to EPA in 2019.

It is noted that item e(2) is similar to the Storm and Flood Events Plan for the WPCF. For the sewer system, Tighe & Bond's Report 7, Climate Vulnerability Assessment, meets the requirements of item e(2) as well item 1) under footnote 18.

Holyoke believes that the work referenced in this response addresses the majority of the requirements set out in Item 2. Sewer System and respectfully requests that the permit language be revised to acknowledge the planning work that has already been done by Holyoke.

In addition, Holyoke has specific concerns regarding 2.i(c)(iii), which requires a plan for alternative power supply. The City understands that diesel fuel that is used to run back-up generators may be phased out as early as 2030. Further complicating this issue, is that there is no known large battery, solar, or wind-powered generators that can provide the power necessary to operate pumping stations of the size operated by the City of Holyoke. The City requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

Response 6

Regarding the request to change the permit language to acknowledge work already completed by the Permittee, see Response 5.

Regarding the requirement for alternate power supply, EPA considers backup power to be necessary to properly operate and maintain the POTW. Given the potential for human health impacts that could result from loss of power, EPA does not consider a preemptive variance or commitment to enforcement discretion for a hypothetical violation several years in the future to be appropriate, particularly because the concern described by the commenter is beyond the term of this permit. EPA acknowledges the potential challenges in transitioning from one type of generator to another in the future but confirms that the Permittee must maintain consistent alternate power sufficient to operate the facility in compliance with the permit.

Comment 7

Part D Alternative Power Source, page 20 of 35. As previously mentioned, Holyoke requests that this language be modified to allow for a variance or enforcement discretion should the City lose access to alternative power supplies.

Response 7

See Response 6.

Comment 8

Section E, Industrial Users, Item 6 requires testing for PFAS for known contaminated sites, firefighting training facilities, airports, and other expected sources. The implication is these may be enforceable limits. Holyoke requests the following change to the last sentence of this section, "All monitoring results may be used by EPA in the next permit reissuance to ensure the discharge continues to protect designated uses." Change to; All monitoring results are for informational purposes and data collection only. Once there is an approved PFAS test method that is finalized through the 'Rule Making Process' then monitoring results after the approval date will be used by the EPA in the next permit reissuance to ensure the discharge continues to protect designated uses.

Response 8

The comment suggests that monitoring of flow from industrial users using Draft Method 1633 should be for informational purposes only until the method is finalized. EPA notes that in July 2023 EPA published[36] a fourth draft of Method 1633 which incorporated the quality control acceptance criteria for all aqueous matrices (surface water, ground water, and wastewater) derived from the multi-lab validation study. While EPA acknowledges that the full method has not been finalized, EPA considers that there will not be any further changes to the wastewater portion of the method that would impact usefulness of the results. Therefore, EPA maintains that all monitoring results using Method 1633 may be used to characterize the influent, effluent and sludge waste streams in the next permit reissuance.

Comment 9

Page 31 of 35, Outfall 009 and Berkshire Street CSO Treatment Facility, Total Residual Chlorine (TRC) Effluent Limitation

In addition to a daily maximum TRC limit of 0.24 mg/l required for CSO discharge based on the acute criteria of 0.019 mg/1, EPA is also applying an average monthly TRC limit of 0.14 mg/I, based on the chronic criteria of 0.11 mg/l. According to EPA's Technical Support Document for Water Quality-Based Toxics Control (EPA, March 1991), while acute effects are limited based upon one-hour exposures at critical low flow conditions, chronic effects are limited based on four-day exposures at critical low flow conditions. While it is possible for a sudden intense rainfall event to result in CSO discharges during low flow conditions, it is unlikely that an event that persists for at least four (4) days would not increase flows well above critical conditions.

Holyoke disagrees that disinfected CSO discharge has the reasonable potential to cause an exceedance of the chronic instream criteria for total residual chlorine and requests that this effluent limit be removed from the permit. Holyoke notes that the previous permit contained a monthly average limit to TRC, however that limit was incorrectly applied and as such, antibacksliding does not apply.

Response 9

EPA agrees that a monthly average TRC limit is not necessary given that the CSO Treatment Facility is an intermittent discharge. The 2016 Permit also did not include a monthly average TRC limit for this same reason (as documented in Response 5 of the 2016 Response to Comments document[37]). Therefore, this limit has been removed from the Final Permit.

B. Comments from Nisha Patel, P.E., Director, Water Planning and Management Division, Bureau of Water Protection and Land Reuse, Connecticut Department of Energy and Environmental Protection:

[36] Available at: https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas

[37] Available for reference at: https://www3.epa.gov/region1/npdes/permits/2016/finalma0101630permit.pdf

Comment 10

The Connecticut Department of Energy and Environmental Protection (CTDEEP) is providing comment on the draft NPDES permit for the Holyoke water pollution control facility referenced above. The draft permit authorizes discharges of treated wastewater to the Connecticut River in Massachusetts which subsequently flows through Connecticut to Long Island Sound (LIS).

As a downstream state, Connecticut has a keen interest in WWTP discharges and potential impacts to both the major receiving tributaries and LIS. LIS is affected by hypoxic conditions, which occur annually in the summer. Hypoxia in LIS has been well documented to result from excessive amounts of nitrogen. Discharges from wastewater treatment plants contribute to the nitrogen loading and subsequent hypoxic conditions in LIS.

In response to the occurrence of hypoxia 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. In addition to a number of nitrogen reduction efforts required of Connecticut and New York, the TMDL specified a 25% reduction in the baseline nitrogen load from WWTPs located upstream of Connecticut with discharges that ultimately flow to LIS (MA, NH, and VT). At that time, nitrogen monitoring data was not available and the baseline load for the upstream state's WWTPs was determined using design flows and an average discharge concentration (15 mg/L). It is important to note that very few, if any, WWTPs were operating at design flow capacity at that time. Because of this, the baseline load provided in the TMDL for WWTPs located upstream of Connecticut was grossly overestimated.

Nitrogen loads from the upstream state's WWTPs were later determined using 2004-2005 monitoring data and average flows. In cases where nitrogen monitoring data were not available, an assumed concentration was used that varied based on the level of treatment. Based on this analysis, it was stated that the upstream states "are meeting" the TMDL target nitrogen load. However, little if any actual nitrogen removal efforts were implemented at that time. The total nitrogen load estimate was used as a "not to exceed" cap in WWTP discharge permits. We believe the 2004-2005 nitrogen load estimate more accurately reflects actual total nitrogen discharges from WWTP's located in the upstream states. As such, this estimate represents the baseline load from which a 25% reduction target should be established in accordance with the TMDL. Additionally, it is a misrepresentation to state or infer that the upstream states are meeting the LIS TMDL.

Response 10

EPA acknowledges that there is uncertainty with regards to the actual load of nitrogen being discharged in 1998. In developing its approach to nitrogen effluent limits in the Connecticut River watershed, along with 2004-2005 estimate, referenced by the commenter, EPA considered the scientific papers published after the completion of the TMDL that cast doubt on the 1998 21,672 lb/day 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 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.

For example, in 2013 the United States Geological Survey (USGS) published an estimation of the total nitrogen load to LIS from Connecticut and contributing areas to the north for October 1998 to September 2009.[38] 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.[39] 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.[40] 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.[41],[42] 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.[43]

Uncertainty regarding to the out-of-basin load assumed in the TMDL can never be removed because there is very little out-of-basin point source nitrogen effluent data from 1998. Rather than attempting to recalculate or refine the baseline, EPA has determined that the imposition of the TN effluent limitations is consistent with requirements and assumptions of the TMDL by imposing (for the first time) enforceable load restrictions on the facility to prevent the discharge from increasing and contributing to further degradation of LIS. Capping the aggregate out-of-basin load while allowing the receiving waters to respond to significant in-basin reductions is a reasonable approach to meeting EPA's obligations under Section 301 of the Act. LIS is subject to extensive monitoring, and the impact of nutrient reductions on water bodies can take time to manifest. EPA will be evaluating the receiving water response over this permit cycle and will take this information into account when determining the need, if any, for more stringent TN effluent limitations. For this reason, despite the irreducible uncertainty regarding the 1998 out-of-basin load, EPA will implement the TMDL as described in the Fact Sheet, including the effluent limit and the optimization requirement for Holyoke as proposed in the Draft Permit.

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[38] 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

[39] 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

[40] 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.

[41] Moore (2011), page 968.

[42] 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.

[43] Maupin (2011), page 954.

Comment 11

The states of Connecticut and New York met the TMDL target reductions for nitrogen in 2014 and 2017, respectively. Additionally, Connecticut's WWTPs discharged 5.8 mg/l of nitrogen in aggregate, based on a five-year average (2018-2022). This includes WWTPs that have not pursued technology upgrades for nitrogen removal. Connecticut continues to work on additional reductions in nitrogen at WWTPs for the betterment of our receiving waters and ultimately LIS.

As Connecticut continues to achieve greater nitrogen reductions at its WWTPs, the load from the upstream states consequently becomes a greater portion of the total load to LIS and warrants full attention. 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.

Response 11

EPA acknowledges this comment.

Comment 12

CTDEEP notes that the draft Holyoke permit includes a total nitrogen limit in pounds per day which is to be reported as the rolling annual average. This total nitrogen limit of 730 pounds per day exceeds the monthly average loading of 517 pounds per day based on 2017-2022 data (Appendix A FS). This equates to an allowable increase of 41% in the total nitrogen load to LIS. It has been assumed that this permit limit will not result in an increase of total nitrogen above the target load. However, as stated in the above paragraphs, the TMDL baseline total nitrogen load for upstream states was overestimated and therefore, the TMDL target for plants such as this, is an overestimate. WWTPs located in the upstream states have initiated little nitrogen removal efforts, none of which would result in a 25% reduction. Any increase in total nitrogen loading from the WWTP likely represents an actual total nitrogen increase since the TMDL was established in 2001, and such increased load has the potential to adversely impact LIS.

CTDEEP recognizes that Montague has two (2) combined sewer overflow (CSOs) discharges to the Connecticut River. Over the past 30 years, the State of Connecticut has invested approximately $2 billion to reduce its CSOs. We are interested in the progress other states in the region like Massachusetts are achieving with CSO reduction.

Response 12

EPA acknowledges that the nitrogen limit of 730 lb/day is above Holyoke's 2017-2022 annual average load. However, EPA is adopting a systemic permitting approach that includes continued optimization with effluent limits that provides 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 the LIS watershed and is designed so that nitrogen loadings to LIS will not increase. This aggregate, gross-level approach is appropriate given the large number of facilities whose discharges contribute to TN loading into LIS and the geographic expanse in which they are situated.

Comment 13

The draft permit contains a special condition (Part I.G.1) for the WWTP to continue to optimize treatment in order to achieve the greatest performance of nitrogen removal and minimize the annual average mass discharge of nitrogen. This condition also includes a requirement for WWTP to report annually on the nitrogen load discharged from the facility and track changes in the load relative to the previous year and past five years. We note that if annual average total nitrogen increases, the permittee must include an explanation for this increase. We concur with this condition and request that it remains in the final permit.

Response 13

EPA acknowledges this comment.

Comment 14

While we greatly appreciate the initial steps taken by EPA to include an enforceable nitrogen load limit, we have concerns that any allowable increase in nitrogen loads will exceed the actual nitrogen load that was occurring at the time the TMDL was developed. Because any increase in nitrogen loads will impact LIS, we request that EPA carefully execute Part I.G.1 of the permit to optimize performance and monitor and track nitrogen loading to ensure that no increase in total nitrogen loads from the upstream states is allowed.

As always, we are available to meet to discuss our comments and achieve our common goal of providing the best possible protection for the environment.

Response 14

EPA acknowledges this comment and is making efforts to reduce nitrogen loading in LIS from upstream states, as evidenced by the wholistic approach presented in new LIS permits in both Massachusetts and New Hampshire. This is discussed in more detail in Section 5.1.9.1 of the Fact Sheet.

Also see Response 12.

C. Comments from Kelsey Wentling, Connecticut River Conservancy:

Comment 15

I am submitting comments on the revised draft National Pollutant Discharge Elimination System (NPDES) permits for the Holyoke Water Pollution Control Facility (WPCF) on behalf of the Connecticut River Conservancy (CRC), formerly the Connecticut River Watershed Council. CRC is an environmental nonprofit dedicated to protecting the entire Connecticut River valley

through initiatives that support clean waters, healthy habitats and thriving communities. The Holyoke WPCF discharges into the Connecticut River and so is of interest to us. Thank you for your consideration of our comments.

Response 15

EPA acknowledges this comment.

Comment 16

Both the permit and the fact sheet identify Connecticut River Segment MA 34-05 as the receiving waters for the WPCF. This segment includes 15.9 miles from the Holyoke Dam to the Massachusetts/Connecticut border in Longmeadow. However, several of the Holyoke CSOs (018, 019, 020, 021, 023) discharge upstream of the Holyoke dam into segment, MA34-04, which includes the stretch of river from the confluence with the Deerfield River to the Holyoke Dam and so would be considered receiving waters for some CSOs included in this permit. MA 34-04 is impaired due to E. Coli, as well as water chestnut and PCB in fish tissue.[1]

[1] https://www.mass.gov/doc/final-massachusetts-integrated-list-of-waters-for-the-clean-water-act-20182020-reporting-cycle/download

Response 16

EPA acknowledges this comment and has updated the Final Permit to indicate that the receiving water is both Segments MA 34-05 and 34-04 of the Connecticut River. This clarification does not have any other impact on the permit.

Comment 17

CRC supports the addition of a required WWTF Major Storm and Flood Events Plan under section I.C.1. This is a commonsense approach and a first step in preparing for the increased frequency of flood events expected in the northeast as the area experiences the impacts of climate change.[2]

[2] https://www.epa.gov/climate-indicators/climate-change-indicators-river-flooding

Response 17

EPA acknowledges this comment.

Comment 18

The median pH for the Holyoke WPCF was 7.3 S.U. in the review period, with no exceedances of their current limits and a minimum. EPA is extending the expanded allowable pH range for this facility of 6.0 - 8.3 S.U., instead of the state-wide standard of 6.5 - 8.3 S.U., As with several recent draft permits in the watershed, the Holyoke permit allows the WPCF to undertake a study to determine if they want to continue this expanded range in the next permit. We realize that some facilities may opt to undertake the study while others may not. This will create inconsistent standards for facilities throughout the watershed and so we prefer that the pH range for this and other facilities with the same permit conditions be narrowed to come into compliance with the MA WQS range of 6.5 - 8.3 S.U.

Response 18

EPA acknowledges that some discharges are allowed an expanded pH range, whereas others are not. EPA disagrees that this results in "inconsistent standards" but considers that this site-specific allowance is appropriate and is applied consistently throughout Massachusetts. Only discharges that can be demonstrated to not result in a violation of water quality standards at an expanded range are allowed an expanded range. EPA considers this expanded range to be protective of water quality standards and has maintained the expanded range in this permit term along with an allowance for a pH study that will be evaluated in the next permit reissuance. Therefore, this comment does not result in any change to the Final Permit.

Comment 19

In the draft permit, EPA proposes to increase discharge limitations for both copper and lead. CRC has concerns about the justification for these increases.

a. The 2016 permit allows for a monthly average copper limit of 3.5 ug/L, a daily maximum copper limit of 4.7 ug/L, and a monthly average lead limit of 0.73 ug/L. The 2023 draft permit increases this to a copper daily maximum of 25.1 ug/L and monthly average of 21.6 ug/L, while lead increases to 1.6 ug/L. The fact sheet explains the justification for this increase.

b. The City of Holyoke conducted an Ambient Connecticut River Study which sampling of ambient conditions for aluminum, copper, and lead in the Connecticut River upstream of Holyoke's discharge. I could not find this study online and it does not appear to be a public document, nor is the full citation available in the fact sheet. The methodology and results of this study are important for the public to understand when considering EPA's justification of the increase in copper limits. Based off the brief narrative description of the study, it seems the permittee conducted ambient sampling for aluminum, copper and lead for three months in the summer of 2020 and that the results of these samples were compared to WET test from 2010-2014. There is no indication of how many samples were taken in the 2020 time period nor the suitability of the comparison of the results from the 2020 study and the WET test results. The fact sheet draws the following conclusion: "For each metal, the results were significantly lower than the prior years, and the report indicates that the previous sampling may have been contaminated due to proximity of the previous sampling location to moored boats, boat traffic and boat docks." It is not clear how the report came to this determination and the conclusion does not appear to be sufficiently justified. It is also not clear how 'significantly lower' is defined numerically, though this information is likely in the 2020 study. We are not aware of any out of the ordinary boating activity in this specific stretch of river compared to other nearby portions of the Connecticut River. The closest marina is the Redcliffe Canoe Club three miles upstream of the WPCF and another small marina roughly four miles upstream; both marinas are above the Holyoke dam.

c. The fact sheet notes that the new (2020) sampling location is one mile downstream of the old sampling location in an area less likely to be impacted by 'these type of

contamination'. CRC request further specification on the sources of contamination and the methods by which the 2020 study identified boats activity as the source of contamination.

d. CRC requests information about the coordinates of the new sampling location. The draft permit indicates that WET test samples should be taken immediately upstream of the zone of influence (we note that the draft permit lacks a definition for the zone of influence). Given the new sampling location used in the 2020 study, what will be the location of WET testing for the final 2023 permit? Without this information, it is difficult for us to understand how the change in sampling locations impacts sample results.

e. In its characterization of ambient conditions, EPA considered both the results of the 2020 study as well as WET testing results from the review period. EPA is uncertain as to whether the recent WET sampling was taken at the old or new sampling location. It seems that the WPCF would be able to readily provide this information and CRC requests that the WPCF and EPA work to identify the location of the sampling during the review period and update the fact sheet with this information for the final permit issuance. Given our concerns about the results of the 2020 study, outlined in 4(b) of our comments, we do not believe it is appropriate at this time to include the 2020 results in the characterization of ambient conditions.

f. CRC agrees with EPA's assessment that, considering both CWA § 402(o) and 303(d)(4)(B), it is accurate to state that the provision (303(d)(4)(B)) applies to copper and lead limits only insofar as the limits are consistent with antidegradation. CWA § 402(o) prohibits "effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 1313(d)(4) of this title." 303(d)(4) does allow for revision of an effluent load *only* if the revision is consistent with the state's antidegradation policy. EPA notes that the adjustment of limits to the current actual load would not represent a new or increased actual discharge and that EPA conferred with MassDEP and determined this reasoning is aligned with Massachusetts' antidegradation policy. Massachusetts antidegradation policy includes a 3-step review to determine if the discharges undergoing permit renewal will impact existing uses. These steps are: (1) An identification of existing uses; (2) A determination of water quality impact; and (3) A comparison with criteria.[3] Documentation of this process is not included in the draft permit or fact sheet, and it is unclear whether this review took place. Given this, CRC does not agree that the increased limits for copper are aligned with the requirements under CWA 303(d)(4)(B), which stipulates that effluent limitations may only be revised if they are consistent with state policy.[4] Additionally, the facility has not met any of the exemptions under CWA § 402(o)(2). Rather than increase the copper and lead limits, it would be more appropriate for EPA and MassDEP to undertake an antidegradation study before increasing the allowable limit for copper and lead.

[3] https://www.mass.gov/doc/antidegradation-implementation-procedures-0/download
[4] https://www3.epa.gov/npdes/pubs/pwm_chapt_07.pdf

g. CRC also does not agree with EPA's reasoning that, "adjusting these limits to the current actual load (if higher than the permitted load) would not be a new or increased discharge of pollutants and would, therefore, be consistent with antidegradation at this time." Under this logic, when a facility discharges a pollutant at a rate higher than permitted, that would justify increasing pollutant loading to match the actual discharge, which would be backsliding. CWA § 402(o) refers to "effluent limitations," and not to actual loading amount.

h. EPA sets the copper and lead limits based on 95th percentile values for effluent data in the review period. Section 5.1.10.1 states that there is limited site-specific data, it is not clear why this method is used to determine the appropriate copper and lead effluent limits. Facilities that have limited site-specific data are subject to hardness-dependent criteria, outlined in Appendix C: Calculation of Hardness-Dependent Fresh Water Dissolved Metals Criteria Values of the Massachusetts Surface Water Quality Standards. EPA instead uses a mass-balance evaluation to determine the revised limits. This results in proposed limits that are higher than nearby wastewater facilities, such as the Westfield WWTP, which has draft copper limits of 18.6 µg/L average monthly and 22.5 µg/L daily maximum.

i. CRC supports the proposed WET testing as well as the total Aluminum limit requirement.

Response 19

EPA has responded to each part of the comment below.

Regarding part a, EPA acknowledges the changes described are accurate.

Regarding part b, EPA notes that the Ambient Connecticut River Study was reviewed by EPA during permit development, EPA summarized the pertinent details in the Fact Sheet and EPA included it as part of the administrative record during the public comment period. If the commenter was interested in reviewing the full study, it was available upon request. In any case, EPA will provide the requested information in this response (*i.e.*, number of samples, numeric comparison of results and sampling locations). First, the study included 13 samples for each metal from June through August of 2020. Second, the 2020 study resulted in median concentrations for copper and lead of 1.1 µg/L and 0.15 µg/L, compared to the 2010-2014 WET results of 3.8 µg/L and 1 µg/L, respectively. Third, EPA confirms that the 2010-2014 sampling location was at the Holyoke Canoe Club and the 2020 sampling location was one mile downstream of the canoe club at the Holyoke Gas & Electric River Road location. The study's QAPP describes this new sampling location as: "a straight run of river prior to this sampling location, few privately docked boats along the stream and in a very low traffic location."

Regarding part c, see the description of the sampling location in part b above. Regarding sources of contamination, the study refers to proximity to boat traffic based on field observation.

Regarding part d, the GPS coordinates are 41° 13' 15" N and -72° 36' 11" W. EPA agrees that future WET test ambient samples should be taken at a location not impacted by boat traffic immediately upstream of the zone of influence of this discharge. Given that the receiving water is not tidal, upstream of the zone of influence is immediately upstream of the outfall.

Regarding part e, EPA agrees that further clarification regarding the WET test sampling locations during the review period (*i.e.*, 2017-2022) could have been provided by the Permittee upon request. However, in EPA's review of the WET test and ambient study data, EPA found that the use of the WET test data alone or the WET test data combined with the ambient study data both resulted in the same permit conditions (*i.e.*, median copper and lead were non-detect in all cases). Therefore, EPA chose to use all available data.

Regarding parts f and g, EPA confirms that an effluent limit may be made less stringent (*i.e.*, backslide) if it is consistent with the state's antidegradation policy and the revised limit would not result in a violation of water quality standards (the "catch all" provision under CWA section 402(o)(3)). In this case, EPA determined that the proposed limits for copper and lead in the Draft Permit were consistent with the state's antidegradation policy and will achieve water quality standards, as described in the Fact Sheet at 38-39 and explained further below.

To the extent the commenter is suggesting that relaxation of an effluent is not allowed based on satisfying antidegradation regulations unless anti-backsliding regulations are also satisfied independently, EPA provides the following response. Relaxation of water quality-based limits is permissible if *either* the requirements of section 402(o)(2) *or* section 303(d)(4) are met. These two provisions are independent exceptions to the prohibition against relaxation of permit limits. *See* proposed Great Lakes guidance, 58 Fed. Reg. at 20837 (Apr. 16, 1993) and *American Iron and Steel Inst. v. EPA*, 115 F.3d 979, 993 (D.C. Cir. 1996). In this case, EPA is relying on § 303(d)(4)(B) to allow relaxation of the limits for Holyoke. In other words, EPA agrees with the commenter that this change is "backsliding" but it is permissible because the receiving water meets or exceeds water quality standards for copper and lead and the change is consistent with the State's antidegradation policy. *See* CWA § 303(d)(4)(B).

The commenter's focus on "actual" versus "permitted" load is misplaced as an anti-backsliding concept. Rather, as described in the Fact Sheet at 38-39, EPA focused on "actual load" only for purposes of the State's antidegradation policy. EPA confirmed that the State does not consider adjusting permit limits to current actual load (if higher than the permitted load) does not amount to a "new or increased" discharge under its antidegradation policy.

In considering effluent limit increases, EPA's decisions must be made in accordance with state water quality standards, which specify antidegradation policies and procedures for allowing new or increased discharges of pollutants. Federal regulations require each state to develop methods for implementing antidegradation policies. *See* 40 CFR § 131.12(b). To that end, Massachusetts developed "Implementation Procedures for the Antidegradation Provisions of the Massachusetts Surface Water Quality Standards, 314 CMR 4.00."[44] These procedures provide instruction for applying the state's antidegradation policies, specifically, for reviewing new or increased discharges from point sources, including wastewater treatment plants, to surface waters of the Commonwealth. In summary, the procedures include the following steps for considering such new discharges.

1. Determine applicability of specific antidegradation designations by pollutant. Therefore, a waterbody may be a high quality (Tier 2) water for one pollutant of concern and at or above the criteria (Tier 1) for another. These designations are determined using new or existing data. MassDEP may require an applicant to obtain sufficient water quality data to demonstrate the receiving water characteristics for any parameter to be affected by the proposed new or increased discharge.

2. If the level of a particular pollutant in a water body is at or above the water quality criteria (Tier 1), then no lowering of water quality may occur. In that case, any loading of that pollutant from the new or increased discharge must be at a level at or below the water quality criteria.

3. If the level of a pollutant is below the water quality criteria (Tier 2), then there is remaining assimilative capacity remaining in the receiving water. In that case, new or increased discharges of the pollutant are allowed where either the pollutant load increase is determined to be insignificant or the lowering of water quality is of economic or social importance.

In this case, the Connecticut River downstream of the Holyoke WWTF was determined to be Tier 2 (*i.e.*, concentrations below water quality criteria) for copper and lead based on the data presented in Appendix A of the Fact Sheet. Therefore, a new or increased discharge of these pollutants is allowed if the pollutant load increase is determined to be "insignificant." Massachusetts regulations at 314 CMR 4.04(2) indicates that the Department has determined that discharges are insignificant if the new or increased discharge of a pollutant would use less than 10% of the available assimilative capacity of the receiving water for that pollutant. Based on this definition, EPA found that setting the effluent limitation equivalent to the current load of copper and lead from the Holyoke WWTF would be insignificant because it would not use any of the remaining downstream assimilative capacity compared to current conditions. In other words, the limits would not result in any actual new or increased loads of copper and lead, which is equivalent to using 0% of the currently available downstream assimilative capacity. Therefore, EPA concluded that these limits were "consistent with antidegradation." EPA also acknowledges that a further relaxation of the limit up to 10% of the remaining

[44] Available at: https://www.mass.gov/doc/antidegradation-implementation-procedures-0/download

downstream assimilative capacity may be allowable under Massachusetts' antidegradation policy, but EPA has determined that a more detailed antidegradation review must be conducted before that additional load may be allocated through less stringent permit limits.

EPA has coordinated with MassDEP regarding this application of its antidegradation policy. MassDEP concurs that this is an appropriate application and concurs with the ultimate finding that the discharges are "insignificant" and thus allowable under the policy.

Regarding part h, EPA clarifies that the reference to "limited site-specific data" was regarding site-specific aluminum criteria. Given the limited data, only a default aluminum criterion could be applied in the development of this permit. On the contrary, EPA had sufficient effluent and ambient data for copper and lead.

Regarding part i, EPA acknowledges this comment.

Comment 20

The fact sheet states that the rolling average nitrogen load ranged from 403 lb/day to a maximum value of 668 lb/day and the draft permit proposes a nitrogen limit of 730 lb/day. The 2016 permit included a special condition target for the facility to average 696 lb/day of nitrogen. The facility has achieved that during the review period, yet the proposed limit in the draft permit is set at 730 lb/day. CRC does not believe this approach to capping nitrogen at the 730 lb/day limit works towards the goals of the CCMP to reduce out-of-basin nutrient loading; the extended cap of 730 lb/day seems to be a step backwards from the 2016 permit. Specifically, if over the lifetime of the 2023 permit the facility were to fully realize the proposed cap, this would represent a nitrogen loading increase of 62 lb/day. While the permit requires implementation of optimization methods to ensure minimization of total nitrogen, this requirement to "minimize" is vague. At a minimum, we believe it would be helpful to provide the WPCF with measurable benchmarks in nitrogen reduction to establish expectations for reduction in nitrogen so that both the facility and the public can understand the goals set out for the next five years.

Response 20

The comment suggests that nitrogen optimization benchmarks would be useful. EPA determined that the nitrogen limit in combination with an optimization requirement is sufficient to ensure the out-of-basin load does not increase. See Responses 10 and 12. Given that the facility has been required to optimize TN removal for many years based on their 2009 and 2016 Permits, EPA does not expect significant reductions in the TN concentration based on further optimization resulting from this permit reissuance. Therefore, EPA finds that optimization benchmarks are not warranted.

Comment 21

In determining whether to require phosphorus monitoring in the draft permit, EPA draws on data from fifteen years ago, which represents that most recent available phosphorus data. This is and of itself demonstrates the need for more recent phosphorus data. EPA indicates that the next

permit will require phosphorus monitoring, at which point the permit may be drawing on data two decades old. The Chicopee WPCF 2021 NPDES permit, a facility similar in size and with fewer CSOs, includes phosphorus monitoring requirements from April – October with the following justification, "To be able to quantitatively determine the potential that phosphorus discharges from the Chicopee Water Pollution Control Facility may cause or contribute to the development of excessive plant growth in the Connecticut River in the next permit cycle, the Draft Permit includes the requirement to monitor phosphorus monthly on a seasonal basis, from April 1st through October 31st." CRC believes that it would be reasonable and consistent to likewise require phosphorus monitoring at the Holyoke WPCF.

Response 21

The comment suggests that phosphorus monitoring be included given that the data used in permit development was from 15 years ago and given that the 2021 Chicopee permit includes phosphorus monitoring.

EPA understands this comment to be requesting effluent phosphorus monitoring rather than ambient phosphorus monitoring, given that the 2021 Chicopee permit includes effluent monitoring but not ambient monitoring. Although the ambient data used in this permit development was from 2008, the effluent data was from the 2021 permit application, as noted on page 35 of the Fact Sheet. EPA considers the purpose of effluent monitoring is to characterize the discharge and/or ensure compliance with a permit limit. In this case, EPA performed a reasonable potential analysis with respect to phosphorus and determined that the downstream TP concentration under critical conditions was 0.03 mg/L. Based on this being well below the threshold of 0.1 mg/L as well as the significant dilution factor of 74, EPA concluded on page 36 of the Fact Sheet that a monthly monitoring requirement was not necessary to characterize the discharge in this case. In contrast, Chicopee did not have any effluent data available in the development of the 2021 Permit.

As mentioned in the comment, the NPDES Permit Writers' Manual (PWM) provides guidance on monitoring requirements. The PWM chapter 8.1.1 states "NPDES permits must also specify the… frequency sufficient to yield data that are representative of the activity." This gives the permit writer a certain amount of discretion in determining sampling/monitoring frequencies. Based on this, EPA noted in the Fact Sheet at 36 that sufficient monitoring to characterize the discharge in the next permit reissuance would be included in the next permit application. It appears the commenter may have misunderstood this by suggesting that "phosphorus monitoring will be required in the following permit." EPA did not indicate monitoring would be required in the following permit but maintains that phosphorus monitoring required in the next permit reapplication is sufficient for the purposes of characterizing the discharge in this case.

This comment does not result in any change to the Final Permit.

Comment 22

CRC supports the efforts of EPA and DEP to characterize PFAS inputs to river systems. We support the quarterly influent, effluent, and sludge testing requirement. We understand that

wastewater facilities are not yet equipped to limit or treat PFAS and support EPA's intent to use these data to ensure the future permits will continue to protect designated uses.

Response 22

EPA acknowledges this comment.

Comment 23

Given that native population of Atlantic salmon in the Connecticut River have been extirpated and federal efforts to reintroduce the species ended in 2013, we wonder if it would instead make sense to focus EFH precautions on shortnose sturgeon. This may not change the permit conditions but seems a more relevant species to consider when taking steps to protect and preserve EFH.

Response 23

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §1801 et seq. (1998)), EPA is required to consult with the National Oceanic and Atmospheric Administration Fisheries Services (NOAA Fisheries) if EPA's action or proposed action that it funds, permits, or undertakes, may adversely impact any essential fish habitat (EFH).

As indicated in the comment, the receiving water of the Holyoke Water Pollution Control Facility (WPCF) is the Connecticut River. The Connecticut River has been designated as EFH for Atlantic salmon[45]. Once this EFH designation is confirmed, EPA must consult with NOAA Fisheries regarding the Atlantic salmon EFH. EPA has no flexibility to substitute shortnose sturgeon or other species as part of the EFH consultation. EPA initiated EFH consultation with NOAA Fisheries Habitat and Ecosystem Services Division on October 24, 2023. NOAA Fisheries responded on October 25, 2023, acknowledging that "*we [NOAA Fisheries] have no additional conservation recommendations to provide.*" This concluded EFH consultation for the Holyoke WPCF.

EPA Region 1 also reviewed the "action area" of the Facility's discharge to determine whether federally protected species protected under the Endangered Species Act overlapped with this discharge area. According to the NOAA Fisheries Mapper[46], EPA and determined that several life stages of the endangered Shortnose sturgeon and Atlantic sturgeon are likely present in the action area, therefore, ESA section 7 consultation was required. EPA initiated ESA consultation with NOAA Fisheries and NOAA Fisheries responded on November 6, 2023, stating that NOAA Fisheries "*concurs with EPA's determination that the action is not likely to adversely affect listed species or critical habitat.*" This concluded ESA consultation with NOAA Fisheries for the Holyoke WPCF.

Finally, EPA notes that the pollutant limits and requirements included in the Holyoke WPCF NPDES permit will meet state water quality standards and are designed to protect all aquatic species, including the shortnose sturgeon. EPA Region 1 makes all EFH and

[45] Final Omnibus Essential Fish Habitat Amendment 2 Volume 2: Table 31: Section 2.2.8, Table 31, pp 179-181. Updated December 8, 2016.

[46] ESA Mapper: https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper

ESA documents available upon request as part of the Administrative Record of the Holyoke WPCF.

Comment 24

We are glad that the Holyoke LTCP was finalized during the review period, and we are supportive of the actions outlined in the recent 2023 consent decree with EPA, MassDEP and the City. The 2016 response to comments included *Table 2: Untreated CSO discharge from Outfall 009*, which helped us to understand if the outfall is discharging the number of times it was designed to do so and how these discharges have changed year-to year. CRC requests that information regarding the number of CSO untreated discharges from Outfall 009 during the review period be included in the fact sheet; the number of events in Appendix A is helpful information but does not seem to separate out the number of days the outfall was active, and the number of days combined overflow was discharged into the Connecticut River untreated. The draft permit requires an annual report with annual precipitation compared to that in a 'typical' year as assumed in the CSO modelling system. How is a typical year defined in this case?

Response 24

As noted in the comment, Appendix A of the Fact Sheet presents the number of events each month but does not indicate how many of these events include CSO discharges of "Untreated Flow to the River" versus flow only "Drained back to WPCF." While this distinction was not required to be reported in the 2016 Permit in terms of number of events, EPA did require monitoring and reporting of the volume of total flow based on this distinction. EPA clarifies the relevant headings in Appendix A of the Fact Sheet for CSO Outfall 009 as follows: "Flow" refers to Treated Flow from the CSO Treatment Facility, "Flow 009 - B - A" refers to Untreated Flow to the River and "Flow 009 - O - A" refers to Flow Drained Back to the Holyoke WPCF. EPA understands the confusion based on these ambiguous headings. Given that the Fact Sheet cannot be updated at this time as it supports the Draft Permit, EPA has provided clarification in response to this comment.

Presumably, the volume of total flow discharged to the river is more helpful than the number of events in assessing the overall water quality impact and overall improvement in CSO discharges over time. Therefore, EPA has carried forward the same monitoring requirements in this permit reissuance to track progress in the future.

Regarding the question about a "typical" year, EPA notes that this generally refers to a year with average precipitation in that geographic location. For the purposes of this permit, the "typical year" refers to the precipitation year as developed or modified by the City of Holyoke for implementation of the City's Combined Sewer Overflow Long Term Control Plan.

Comment 25

Finally, CRC supports the requirements of the draft permit and of *An Act Promoting Awareness of Sewage in Public Waters.* We have reviewed Holyoke's public notification plan and are supportive of the efforts to create an interactive map and email notification of CSO discharges. The interactive map and the maps found in the public notification plan are very clear and are

easier to read than the map included in the fact sheet; it could be helpful to include one of these maps in future fact sheets if possible. Information regarding the most recent CSO discharge is essential for people to be able to safely access and enjoy the Connecticut River, and public notification requirements are a positive step forward in increasing communication about these events and their impacts.

Response 25

EPA acknowledges this comment.

D. Comments from Adam Krantz, Chief Executive Officer, NACWA:

Comment 26

The National Association of Clean Water Agencies (NACWA) appreciates the opportunity to provide comments to the U.S. Environmental Protection Agency (EPA) Region 1's draft Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit issued to the Holyoke Pollution Control Facility (MA0101630) in Holyoke, Massachusetts. NACWA's members have significant concerns with the currently drafted language that must be addressed before EPA Region 1 issues any final permits.

NACWA represents the interests of over 350 municipal clean water utilities of all sizes across the United States including six municipal wastewater utilities in Massachusetts. Our members are anchor institutions in their communities that everyday provide essential service of treating billions of gallons of our nation's wastewater and stormwater in a manner that ensures the continued protection of public health and the environment. This includes taking various voluntary steps to improve their overall resiliency.

Many NACWA members are experiencing increased intensity of storm events and flooding, and they take the potential impacts of those events on their communities very seriously. As all levels of government become more involved in climate resiliency efforts, clean water utilities are often at the forefront of protecting critical infrastructure to ensure that our nation's wastewater and stormwater systems will reliably provide vital human health and environmental services to their communities everyday.

NACWA's members have also already invested billions of dollars to reduce their own climate footprints through a variety of methods, including rebuilding their aging infrastructure and moving from traditional "gray" infrastructure to more climate friendly "green" practices, transitioning from traditional, demanding fossil fuel energy sources to self-sustaining energy production via biogas generation, and repurposing the tons of nutrient rich municipally derived biosolids as sustainable fertilizers.

Response 26

EPA acknowledges this comment and notes that the Final Permit language has been modified to allow the Permittee to submit certain work it may have already completed or is in the process of completing to fulfill the permit's Adaptation Plan requirements. See Part I.C.1.b. of the Final Permit and the General Response.

Comment 27

Despite these efforts at adaptation and mitigation, unfortunately, the novel and overly prescriptive operation and maintenance (O&M) requirements which EPA included in the draft permits not only imply that clean water utilities are not taking climate resiliency seriously, but also presume that it is EPA's role in administering the NPDES program to require utilities to purportedly prepare for storm events now or a century from now. This is simply untrue.

Wastewater utilities already consider their susceptibility to natural disasters and other emergencies as part of their routine planning. Such planning requires extensive local knowledge and regional expertise and coordination, and is achieved both voluntarily and through other programs. The "one-sized-fits-all" NPDES program – which is designed solely to address existing, specific point source discharges into navigable waters – is not an appropriate tool to accomplish many of these resiliency goals.

In addition to it not being an appropriately tailored tool, EPA also does not have authority under the NPDES program to require utilities to undertake activities which are wholly divorced from any actual discharges into "waters of the United States," or even any existing water quality concerns. Clean water utilities are keenly aware of the potentially devastating impacts climate change may have decades and even centuries from now on the systems they are responsible for successfully running every day. But the 5-year permit they receive governing their current effluent discharges from those systems is not the vehicle through which long-term advanced mitigation plans can or should be mandated.

In light of the fact that EPA issues permits directly for Massachusetts, NACWA is also concerned that the unnecessary, costly, and unlawful "Wastewater Treatment Facility Major Storm and Flood Events Plan" and "Sewer System Major Storm and Flood Events Plan" requirements proposed for utilities in the draft permits could serve as a problematic precedent for other NPDES permits issued by state regulatory authorities throughout the country.

Frustratingly, there was no advanced notice of these prescriptive requirements until they appeared in these draft permits issued to a handful of small POTWs in Massachusetts. Such provisions have, to NACWA's knowledge, never been included in any utility NPDES permit before, and, troublingly, it appears that EPA Region 1 is testing them in the context of small-to-medium sized utilities that are not especially at risk to catastrophic storm and flooding events.

It will take every level of government—federal, state, and local—working together to tackle the infrastructure challenges climate change will inevitably bring to municipalities nationwide. The lack of advanced notice and discussion with clean water agencies prior to proposing to mandate these onerous requirements on small communities through a permitting program that has never been—and should not be—used to address them is antithetical to the establishment of the cooperative relationships that will be critical to ensuring successful environmental outcomes in the years to come.

For the reasons outlined below, NACWA asks that EPA Region 1 remove these provisions prior to finalizing the proposed permits, and to instead engage with meaningful dialogue with all interested stakeholders about climate mitigation efforts going forward.

Response 27

See the General Response.

Regarding setting a precedent, EPA notes that adaptation planning is a critical part of keeping the nation's wastewater systems operating during major storm and flood events. Therefore, EPA encourages all states to have wastewater systems plan for major flood and storm events via whatever route they deem most appropriate. EPA notes that the state of Rhode Island already requires adaptation planning in their state issued RIPDES permits.[47] However, EPA issues NPDES permits for only two other states, the District of Columbia, U.S. territories [except Virgin Islands], and certain federal facilities on tribal land. Therefore, concerns over precedent elsewhere is speculative.

The commenter objected to the draft permit on procedural grounds that they were not provided "advanced notice." While EPA very much appreciates the importance of a cooperative relationship with permittees and the regulated community, there is no regulatory requirement that EPA provide "advanced notice" of permit decisions. Rather, under 40 C.F.R. § 124.10, EPA must provide public notice "of the preparation of a draft permit," which it has done here. The formal public notice period is where EPA solicits input in a fair process that provides equal access and opportunity to all stakeholders and interested parties. In this case, based on request from the public, EPA doubled the public notice period from the minimum required 30 days to 60 days to further encourage public input. Interested parties participated in the public notice period and EPA has made numerous changes to the Final Permit requirements in direct response to comments. Additionally, although EPA did not provide additional advance notice prior to providing the required public notice, adaptation planning is demonstrably an issue already under consideration by the regulated community. As indicated by the commenter, wastewater utilities already consider their susceptibility to natural disasters and other emergencies as part of their routine planning. Relatedly, several commenters describe actions WWTFs have already undertaken that may be consistent with the Adaptation Plan requirements.

EPA disagrees with the assertion that EPA is "testing" these requirements on facilities "that are not especially at risk to catastrophic storm and flooding events." Planning for major storm and flood events is crucial to the proper operation and maintenance of all facilities. EPA intends to include the Adaptation Plan requirements in all Massachusetts POTW NPDES permits moving forward. All facilities need to be prepared for direct impacts from major storm and flood events and the potential increased flows from repeated heavy precipitation events.

Comment 28

The Draft Permit's "Operations and Maintenance" Provisions Exceed EPA's Statutory Authority

Public clean water agencies take climate change, natural disasters, flooding, and other emergencies into account as important components of their routine planning. Addressing these issues often involves not only major infrastructure investments, but also regional coordination

[47] https://www.epa.gov/npdes-permits/rhode-island-final-individual-npdes-permits

among multiple local, state, and federal agencies and utilities. EPA's fiat that individual wastewater utilities develop and implement major storm and flood event plans spanning the next 100 years in the context of an NPDES permit is not only irrational, it exceeds the Agency's statutory authority under the CWA.

The CWA provides EPA with authority over the "discharge of a pollutant" by "any person" from any "point source" to a "navigable water." See 33 U.S.C. §§ 1311(a), 1342. While this authority is broad, "there must be an actual discharge into navigable waters to trigger the CWA's requirements and the EPA's authority." Nat'l Pork Producers Council v. EPA, 635 F.3d 738, 751 (5th Cir. 2011). In other words, "EPA [may] regulate through the NPDES permitting system…only the discharge of pollutants," not a source's activities generally. Waterkeeper All., Inc. v. EPA, 399 F.3d 486, 504 (2d Cir. 2005).

Requirements in a permit that is only valid for 5 years which force a utility to plan for and address hypothetical scenarios 20-30 and even 80-100 years out on their face violate the plain language of the CWA. What actual discharge of a pollutant from a point source into a navigable water that is being authorized by the proposed permit is being addressed by such requirements? The draft permit unsurprisingly does not attempt to tie such requirements to an actual discharge; foreseeing the impacts that effluent coming out of a pipe 100 years from now may have on a receiving waterbody is impossible.

In defense of these provisions, EPA Region 1 points to its own regulations at 40 CFR § 122.41(d), which imposes a "duty to mitigate," that requires permittees to "take all reasonable steps to minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment." Setting aside reasonableness for the moment, again NACWA asks, what "discharge in violation" of a permit whose term is statutorily limited to five years is occurring 100 years from now?[1]

Region 1's reliance on 40 CFR § 122.41(e) provides little additional justification. That provision requires permittees to "properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit" (emphasis added). Yet, EPA Region 1 has failed to point to even one express condition of the permit which will be served by these onerous provisions.

Specifically, NACWA questions what effluent limitations—either technology- or water quality-based—the proposed requirements are intended to protect. Under CWA § 301(b)(1), NPDES permits for clean water utilities must include effluent limits based upon secondary treatment technology, which are in no way related to these flooding and resiliency plans. Presumably, then, EPA Region 1 considers these requirements to be necessary to achieve water quality-based effluent limitations, but it has failed to identify a single limitation that might be violated if these extensive provisions are not carried out.

NACWA does not dispute that EPA has authority to impose tailored requirements necessary to ensure that specific discharges do not exceed relevant, identified technology-based limits or those related to the water quality condition of a receiving waterbody. But that authority does not

extend to the imposition of wide-ranging, costly, and infeasible mandates to predict and guard against any hypothetical worst-case flooding or disaster event under the guise of routine "operation and maintenance."

Nor can EPA's regulations be read outside of the statutory authority upon which they are based. Setting aside the glaring issue of not being tied to any discharge actually being authorized by the permit, which is required even by EPA's own regulations, the proposed requirements also exceed EPA's general authority to regulate discharges into navigable waters, as such authority does not extend into a permittee's operations. Region 1 appears to take the position that, under the umbrella of requiring proper "operations and maintenance" of a facility with a point source discharge, it can regulate anything and everything about that facility, including how it manages asset vulnerabilities, where and how it stores records and equipment, and how it should identify potential funding sources for resiliency projects.

While NACWA reiterates that clean water agencies take all of these considerations seriously as part of sound utility management practices, they frankly have little to do with what EPA actually has authority over pursuant to the NPDES program: the effluent discharges flowing from a facility's pipes into navigable waters.

As the U.S. Court of Appeals for the Eighth Circuit has held, "effluent limitations are restricted to regulations governing 'discharges from point sources into navigable waters.' 33 U.S.C. § 1362(11). The EPA is authorized to administer more stringent 'water quality related effluent limitations,' but the CWA is clear that the object of these limitations is still the 'discharges of pollutants from a point source.' 33 U.S.C. § 1312(a). In turn, 'discharge of pollutant' refers to the 'addition of any pollutant to navigable waters.' § 1362(11)."

Although the overall goal of increasing resiliency of the nation's infrastructure in the face of a changing climate is laudable—and one which NACWA's members are constantly pursuing – the text of the CWA is clear. The goal of the NPDES program—which is also quite laudable, and central to the protection of human health and the environment—is the regulation of point source discharges of pollutants into "waters of the United States." The strict liability regime long enforced by EPA and authorized state agencies through the CWA's NPDES provisions must be applied to what they were expressly designed for. EPA Region 1 should adhere to the limits of the NPDES program, and instead allow utilities to address the complex issues surrounding climate change and resiliency comprehensively and in the proper forums.

[1] NACWA notes that the CWA itself only came into being a little over 50 years ago.

Response 28

See the General Response.

EPA also responds to several particular points raised in this comment:

Although it is true that EPA's CWA authority is not unlimited, the commenter's citation to *National Pork Producers Council v. EPA* for this generic proposition is inapposite. That decision addressed a challenge to EPA's NPDES regulations for Concentrated Animal Feeding Operations ("CAFOs"). The regulations at issue required CAFOs to

apply for NPDES permits if they discharged or "propose[d] to discharge." *Id.* at 746. In concluding that "there must be an actual discharge into navigable waters to trigger the CWA's requirements and the EPA's authority", the court was opining on the "propose to discharge" language, *i.e.* the scope of which entities EPA could properly regulate, *not* the content of any permits properly issued to such entities. *Id.* at 749-751. Indeed, the immediately subsequent sentence reads: "Accordingly, the EPA's authority is limited to the regulation of CAFOs that discharge." *Id.* at 751. Here, there is no question that the permittee's facility is, in fact, discharging, and that EPA may therefore issue a NPDES permit to the permittee. The *Pork Producers* decision is of no consequence here and EPA is authorized to include the Adaptation Plan O&M Requirements for the reasons described in the General Response.

The commenter also relies upon *Waterkeeper All., Inc. v. EPA*, 399 F.3d 486, 504 (2d Cir. 2005). That case concerned an earlier, even broader version of the CAFO regulations – one that required *all* CAFOs, subject to limited exception, to apply for NPDES permits. *Id.* 495. Again, the conclusion cited by the commenter – "EPA [may] regulate through the NPDES permitting system…only the discharge of pollutants" – is an opinion on the scope of which entities EPA may regulate and not on the content of those permits. EPA therefore disagrees with the commenter's argument that this conclusion supports the proposition that EPA may not regulate "a source's activities generally." In any event, EPA is not regulating the permittee's "activities generally", but rather including specific permit conditions that are necessary to ensure compliance with state WQS and other applicable law, again as described in the General Response.

The commenter quotes, but does not cite, an 8th Circuit decision. The quote appears to be from *Iowa League of Cities v. EPA*, 711 F.3d 844 (8th Cir. 2013), a case challenging, *inter alia*, an EPA letter that the court determined was "a binding policy on blending." *Id.* at 865. The court vacated this "blending rule" on both procedural and substantive grounds "as in excess of statutory authority insofar as it would impose the effluent limitations of the secondary treatment regulations **internally**, **rather than at the point of discharge into navigable waters**." *Id.* at 878 (emphasis added). The court reasoned that because "effluent limitations are restricted to regulations governing 'discharges from point sources into navigable waters'", EPA lacked authority to "apply effluent limitations to the discharge of flows from one internal treatment unit to another." *Id.* at 877, quoting CWA § 502(11). The Adaptation Plan O&M requirements in this permit intend to assure that the discharge into navigable waters complies with WQS and other applicable requirements. They do not intend to govern flows from one internal treatment unit to another. Therefore, EPA does not agree that this case precludes the permit's adaptation plan O&M requirements.

Comment 29

The Draft Permit Conflicts with the CWA Section 402(k) "Permit Shield"

The legal limits placed on the scope of EPA's authority under the NPDES program exist for good reason. NPDES permits impose stringent and costly requirements on utilities that both EPA

and citizen groups are authorized to enforce. It is therefore incumbent that they be clear and reasonable and provide utilities with certainty.

CWA Section 402(k), the so-called "permit shield" provision, provides important protections for NPDES permit holders by stipulating that compliance with an NPDES permit constitutes compliance with the CWA itself. Courts have interpreted Section 402(k) to mean that, once an NPDES permit is "final," the permit holder must be able to rely on it as the touchstone for its compliance with the CWA. The U.S. Supreme Court summarized the "permit shield" this way: its purpose is to "insulate permit holders from changes in various regulations during the period of a permit and to relieve permit holders of having to litigate the question of whether their permits are sufficiently strict. In short, Sec. 402(k) serves the purpose of giving permits finality." E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112 (1977).

An amorphous requirement that mitigation plans pertaining to climate change projections 80-100 years out be constantly modified "as data sources used for such evaluations are revised or generated" flies in the face of the "finality" Section 402(k) affords permittees. Far from outlining clear obligations for a utility over the length of a permit's term such that the utility can know and plan for the full extent of its CWA obligations at the time of a permit's issuance, such a requirement instead injects extreme uncertainty for utilities, particularly given the ever-evolving literature surrounding climate science.

Perhaps even more troublingly, the requirement to modify plans as new data emerges appears to open the door for outside groups to constantly seek to substitute their own "climate science" for that relied upon by a utility. Citizens are more limited in their ability to enforce the CWA; they may only target permit holders that "discharges pollutants in excess of the levels specified in the permit," or otherwise fail to comply with a permit's conditions. Natural Resources Defense Council v. City of Los Angeles, 725 F.3d 1194, 1204 (9th Cir. 2013). Though, as noted above, the proposed mitigation provisions have no relevance to authorized pollutant discharges, the imposition of a duty to modify the plans based on new available information as a condition of the permit seems almost tailored to provide an opportunity for unwarranted citizen suits.

Public funds should be spent on projects that have been determined through public, transparent processes to provide the greatest benefits to a community. They should not be wasted on costly litigation caused by inappropriate and amorphous permitting language. EPA Region 1 should remove the proposed operations and maintenance requirements in accordance with CWA Section 402(k).

Response 29

See the General Response.

The commenter expressed concern that the Adaptation Plan requirements will deprive them of the "permit shield" offered by CWA § 402(k) because of perceived "amorphous" or "uncertain" permit requirements. EPA has, in response to this and other comments, revised the Final Permit to significantly limit the events which would require revision of the Adaptation Plan. EPA removed the requirements to revise the plan if the data used to develop it are revised or if new data become available. The only remaining event that would require revision is if "on- or off-site structures are added, removed, or significantly

changed in any way that will impact the vulnerability of the WWTF and sewer system." Unlike changes in data, of which a Permittee may not be aware or which may be onerous for the Permittee to remain continually aware of, changes to WWTF structures are wholly within the Permittee's control and awareness. Where such changes could render the Adaptation Plan inaccurate or ineffective, it is only logical that the Permittee adapt the plan to account for such changes. In so clarifying the Adaptation Plan's revision requirement, EPA has addressed the commenter's concerns over the lack of certainty as to when a requirement to revise the Adaptation Plan may be triggered. The Final Permit language does not deprive Permittees or Co-permittees of the "permit shield" established by CWA § 402(k) ("Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title…"). The final language is clear and enumerates particular instances when revision of the Adaptation Plan would be required; it does not "create[] undefined, and thus limitless, obligations." *In re City of Lowell,* 18 EAD 115, 185 (EAB 2020).

Further, the commenter expresses concern regarding citizen suits aiming to enforce the Draft Permit requirement to modify Adaptation Plans based on new available information. The draft language to which the commenter refers has been removed from the Final Permit, as described in the General Response. EPA intends that this change will reduce uncertainty and also notes that it may reduce the likelihood of litigation over that requirement because the scope has been greatly reduced and clarified.

Although EPA appreciates the commenter's financial concerns and reiterates that the Final Permit language may reduce the likelihood of litigation, it is well-established that cost – of litigation or otherwise – is not a factor Congress intended permit issuers to consider. *See, e.g.,* CWA § 301(b)(1)(C) (requires effluent limits to meet water quality standards, without exception for cost), CWA §402(a)(2) (EPA shall prescribe conditions for such permits to assure compliance with enumerated requirements, without exception for cost); *see also Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 33 (1st Cir. 2012), *cert. denied*, 569 U.S. 972 (2013) ("…cost considerations may not be considered by the EPA in the setting of permit limits to assure compliance with state water quality standards."); *In re City of Fayetteville, Ark.*, 2 E.A.D. 594, 600-601 (CJO 1988) ("The meaning of [CWA § 301(b)(1)(C)] is plain and straightforward. It requires unequivocal compliance with applicable water quality standards, and does not make any exceptions for cost or technological feasibility."), *aff'd sub nom. Arkansas v. Oklahoma*, 503 U.S. 91 (1992); *See also, e.g., In re Scituate Wastewater Treatment Plant*, 12 E.A.D. 708, 734 (EAB 2006).

Finally, EPA appreciates the regulated community's concerns regarding cost of the Adaptation Plan requirements and has taken the commenter's concern – that the Adaptation Plan requirements have significant cost implications into consideration and has accordingly made changes to the permit. See the General Response Section B.

Comment 30

The Draft Permit's Requirements Are Unreasonable, Arbitrary, and Unlawful

Under the Administrative Procedure Act (APA), agency actions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law" must be set aside. 5 U.S.C. § 706(2)(A). Moreover, the regulations upon which EPA Region 1 relies for its imposition of the permit's burdensome operations and maintenance provisions require only that "reasonable steps" be taken.

Even assuming for the sake of argument that EPA Region 1 does have the general authority under the CWA to impose the proposed operations and maintenance requirements, they must nevertheless meet these standards. But the costly and onerous provisions in the proposed permit do not; they are unreasonable, arbitrary and capricious.

The costs of developing the proposed plans, which EPA Region 1 did not consider, will be significant, and a 12-month period is simply not long enough to procure the professional engineering and technical services which would be required to develop such plans. Moreover, the plans would require utilities to make public sensitive data that could lead to malicious actors targeting utility infrastructure.

It is also unreasonable to ask utilities to speculate about potential events 100 years from now. As EPA itself once stated in defense of Massachusetts' development of a total maximum daily load (TMDL), a party "can hardly be faulted for refraining from guessing about [climate change] impacts…particularly when…[it] cannot provide any meaningful analysis of whether—and certainly, how—climate change will alter" particular water quality conditions. Conservation Law Foundation v. EPA, EPA Memorandum in Support of Defendants' Motion for Summary Judgement (Filed September 21, 2012).

As noted above, utilities treat resiliency planning and mitigation as a central part of comprehensive utility management. However, EPA Region 1 should not require utilities to take these costly and unreasonable steps in the context of NPDES permitting in the manner proposed. Asking utilities to predict their own vulnerabilities—and the weather—100 years from now in publicly available permitting processes, and to constantly modify those predictions over the course of the permit's term despite the fact that those predictions have nothing to do with what is actually being permitted, is the definition of arbitrary and unreasonable.

Response 30

See the General Response.

In the *CLF v. EPA* filing referenced by the commenter, EPA recognized that "while climate change is very much a real concern, the manner in which climate change will affect the impacts of nitrogen on Cape Cod embayments is still a matter of significant scientific uncertainty." Memorandum in Support of Defendants' Motion for Summary Judgment, 2012 WL 12077196, *Conservation Law Foundation v. EPA*, 964 F.Supp.2d 175 (D. Mass 2013). Similarly, EPA noted that "Plaintiffs [were] unable to point to anything in the administrative record that support[ed] the position that climate change will increase nitrogen impacts to the embayments of Cape Cod." *Id.* EPA itself described the lack of scientific certainty regarding climate change impacts: "it remains unclear how each of these scenarios may affect the loading of nitrogen. Will less precipitation allow nitrogen to remain in soils and not flow to groundwater? Will more precipitation cause nitrogen from

land to flow more quickly into groundwater or surface waters which may increase nitrogen loading? Or, will more precipitation dilute the nitrogen and increase flushing, potentially reducing the effect of nitrogen loaded to downstream embayments…" *Id.*

The uncertainty regarding climate change relative to nitrogen loading EPA expressed in a filing a decade ago does not reflect – and is not analogous to – EPA's position regarding the issues the Permit's Adaptation Plan requirements aim to address. As described in Section A of the General Response, major storm and flood events are already causing known and serious impacts to WWTFs and sewer systems, and EPA considered these examples as a factor strongly supporting the Adaptation Plan requirements. The facts of the *CLF v. EPA* case greatly differed from the facts at hand; it is far from "pure speculation" that major storm and flood events can cause inoperability of WWTFs, noncompliance with effluent limitations, and other grave impacts to water quality. *Id.*

Comment 31

The Major Storm and Flood Events Plan is Overly Prescriptive with Impracticable Requirements and Unachievable Timelines

Overly Prescriptive and Confusing Asks
NACWA believes these requirements are overly prescriptive and unduly burdensome. The draft permit asks municipal utilities in the permit and in various footnotes to investigate and navigate through a wide variety of climate resources that often have variable projections.

Climate projections well out into the distant future (e.g., 2100) are highly variable and likely to change as more data accumulates and in response to global efforts to mitigate greenhouse gases. The requirement to develop a flood events plan and mitigation measures for 80-100 years in the future also ignores that adaptation planning for the extremes of climate change possible in 2100 and beyond requires iterative collaboration between the surrounding municipalities.

The decisions a permittee makes to protect against extreme sea level rise, for example, are directly related to the measures taken by the entire region. Even the case studies cited by the latest National Climate Assessment by the U.S. Global Change Research Program (USGCRP), and that EPA's permit points to as a resource, are community and regionally-based (e.g., Norfolk, VA), and not specific to an individual utility. This demonstrates the need for a comprehensive approach to climate resiliency and not something any one utility can achieve singlehandedly through a permit.

Further, the permit asks an undefined "qualified person" to sleuth through and evaluate vulnerabilities from every year the permittee has operated the utility to 80-100 years into the future. They are to evaluate "at a minimum, worst-case data", a phrase which is unclear on its face in terms of what qualifies as worst case.

NPDES permits are issued every five years. The draft permit requires permittees to plan and take steps to mitigate 80-100 years, well beyond the expected life of many wastewater assets. NACWA believes these long-term planning requirements are outside the scope of the NPDES permitting program.

Unreasonably Short Compliance Time Period
As currently written, the proposed permit language places overly prescriptive requirements on POTWs with obligations to *develop* a plan documenting the significant number of climate possibilities, both short and long-term, that could impact a POTW's operation *and begin implementing* mitigation measures quickly. The Wastewater Treatment Facility Major Storm and Flood Events and the Sewer System Major Storm and Flood Events plan both include requirements for POTWs to assess its asset vulnerabilities, its systemic asset vulnerabilities, and a develop comprehensive mitigation alternatives analysis *within 12 months* of the permit being finalized, and these documents must be updated every 5 years. If assets change, the utility must continually re-evaluate and revisit their vulnerabilities in tandem with upgrades.

Further, the permittee and co-permittees are jointly required to *develop* a plan that looks at the individual sewer system-related assets and assess vulnerabilities, conduct a systemic vulnerability evaluation of the individual system and develop an alternatives analysis, *and begin implementing* mitigation measures within 12 months.

Clean water utilities, regardless of size, will need more than 12 months to plan *and implement* plans of this granularity and magnitude. If EPA insists on including these requirements in the final permits, utilities should be afforded more time to implement. NACWA proposes EPA give utilities at least 36 months to complete both the Wastewater Treatment Facility Major Storm Flood Events Plan and the Sewer System Major Storm and Flood Events Plan.

Significant Cost Burdens to Implement
NACWA has serious concerns with the amount of money a clean water utility would have to spend on preparing the Waste Treatment Facility Major Storm and Flood Events Plan and a Sewer System Major Storm and Flood Events Plan, not to mention updating them when a change is made or at the turn of a permit cycle as well as potentially defending any legal challenge. The investment to do this type of work—hundreds if not thousands of hours of staff time and significant financially resource allocation— will take from the ever-shrinking amount of funding available that could have been used to invest in more pertinent critical infrastructure and mitigate actual water quality impairment of concern to a community in the first place. Further, the significant costs incurred will be passed on to ratepayers, which will be felt by the most vulnerable populations within a community.

Significantly, EPA Region 1 has not assessed the cost burdens this would place on municipal clean water utilities. Few utilities are likely to have the in-house expertise and experience, let alone resources, to expend on this type of excessive climate forecasting and planning. The fact that EPA Region 1 is slipping this novel language into permits for smaller utilities for the first time is even more disturbing, as the Region surely knows quite well that these communities likely don't have the resources or staffing to address these new requirements.

Many clean water utilities are already pouring billions of limited ratepayer dollars into repairing and rebuilding aging sewer and stormwater infrastructure to improve water quality in their communities. NACWA urges EPA, before issuing final permits, to provide the regulated community and the public with a formal cost-benefit analysis and calculate the cost burden on

municipal utilities to meet these new requirements. Permittees and the public should have the opportunity to weigh the net environmental and public health benefits of a climate planning mandate versus the benefits that will be deferred or delayed for other water quality improvement projects.

Response 31

See the General Response.

Regarding the commenter's concerns that climate resiliency must be achieved through a comprehensive, collaborative approach between municipalities rather than in an individual NPDES permit, EPA clarifies that the Adaptation Plan permit requirements are not intended to be a large-scale response to the many consequences of major storm and flood events. Rather, the intent is much narrower and properly within the bounds of this permitting action: to ensure that the permitted facility remains safely operable and capable of treatment to meet the permit's effluent limits during major storm and flood events. The Adaptation Plan requirement appropriately concerns the operation and maintenance of the WWTF, not generalized issues stemming from storms or flooding.

Regarding the commenter's assertion that EPA is including novel language in permits for smaller utilities, EPA notes that it intends to include this requirement in all Massachusetts NPDES permits. Because permits are on differing renewal cycles, the requirements will necessarily be added to some permits before others. Additionally, Holyoke asserted in its comments that the city believes it has already fulfilled most of the Adaptation Plan requirements. EPA has revised the Final Permit language to indicate that the permittee may submit work it has already completed if it fulfills all or part of the permit requirements. Similarly, Montague has already received training in and has used the CREAT tool for this type of planning. NACWA itself has commented that many wastewater treatment facilities are already conducting resiliency planning. EPA notes that much of the work already completed by these utilities may be used to fulfill the requirements of these provisions.

The commenter notes that "the permittee and co-permittees are jointly required to *develop* a plan," EPA clarifies that while the permittee and co-permittee may elect to coordinate their efforts on these plans working jointly is not required by the permit. Specifically, each permittee and co-permittee are separately responsible to create an Adaptation Plan for the sewer system they own.

Comment 32

EPA Region 1 Failed to Consider Community Risks, Vulnerabilities and Security Sensitivities

NACWA strongly urges EPA Region 1 to remove the requirement to make sewer system "map[s] available online in a downloadable Geographic Information System (GIS) format, available to the public, in a manner where the system's performance can be independently assessed and analyzed." This requirement to publish sensitive information online is well beyond the traditional O&M responsibilities of a POTW and would place municipally owned utilities—

that are critical infrastructure themselves—at a greater risk of an attack from bad actors with malicious intents than the minimal benefits of having maps widely virtually available.

The inclusion of such a requirement demonstrates EPA Region 1's failure to fully consider the community risks of publishing vulnerable assets in a forward-facing public manner, especially given the rising concerns over cybersecurity. NACWA recommends this sensitive information remain secure and not be published online for anyone to access and rather made available by request.

Response 32

See the General Response.

Comment 33

Recommendation: EPA Must Consider Major Storm and Flood Event Plans Outside of the NPDES Permitting Program

The Major Storm and Flood Events Plan and Sewer System Major Storm and Flood Events Plans are a novel approach, certainly for municipal wastewater utilities and for the Clean Water Act NPDES program itself. NACWA believes that a less onerous approach outside and separate from the NPDES permitting program would be more effective.

Other programs, such as the Clean Water State Revolving Fund (CWSRF), require utilities seeking low interest financing loans to develop an asset management program which includes many of the requirements to forecast and plan for climate resiliency. NACWA believes mechanisms such as the CWSRF are meaningful ways to obtain similar information and simultaneously have a utility assess its climate resiliency that do not carry the same compliance and enforcement weight.

If drafting and implementing local climate resiliency plans are part of EPA's broader climate mitigation and adaptation strategies, EPA should provide the funding to local communities to construct comprehensive climate impact and resiliency plans for extreme weather events rather than force a mandate to individual permittees to accomplish on their own. Alternatively, EPA could do this work themselves with the authority they have to conduct their own risk assessments. NACWA urges EPA, if they intend to move forward with climate and resiliency efforts, to do so outside of the NPDES permitting program.

Conclusion

For the reasons outlined above, NACWA asks that EPA Region 1 remove these provisions prior to finalizing the proposed permits, and to instead engage with meaningful dialogue with all interested stakeholders about climate mitigation efforts going forward.

Response 33

Regarding the request for EPA to use an alternate avenue to require adaptation planning, see the General Response.

Regarding the suggestion that EPA provide funding for adaptation planning, although the comment is outside the scope of this permitting action, EPA notes current funding mechanisms used for wastewater treatment facility upgrades may be used for adaptation planning. Federal law, at 33 U.S.C. § 1302a, establishes "a clean water infrastructure resilience and sustainability program under which the Administrator shall award grants to eligible entities for the purpose of increasing the resilience of publicly owned treatment works to a natural hazard or cybersecurity vulnerabilities." Entities that receive a grant under this program "shall use the grant funds for planning, designing, or constructing projects (on a system-wide or area-wide basis) that increase the resilience of a publicly owned treatment works to a natural hazard…" through, for example "the modification or relocation of an existing publicly owned treatment works, conveyance, or discharge system component that is at risk of being significantly impaired or damaged by a natural hazard."

E. Comments from Karla H Sangrey, P.E., Engineer Director/Treasurer, Upper Blackstone Clean Water:

Comment 34

Upper Blackstone Clean Water appreciates the opportunity to provide comments on the subject draft NPDES permit. All our Upper Blackstone staff are dedicated to environmental stewardship and specifically to providing treatment that protects air quality, water quality, and public health through compliance with all our environmental permitting requirements. We take these permit requirements seriously, as we also enjoy all the health and recreational benefits that result from the work we do to protect water quality

Comments on Section C. Operation and Maintenance of the Treatment and Control Facilities

Upper Blackstone believes that the requirements for Major Storm and Flood Events Plans for the WWTF and collection system are overly burdensome and beyond the appropriate scope for a NPDES permit renewal. We suggest that these provisions be removed from the draft permit as we believe the goals of the requirements can be better met with a different approach.

Wastewater utilities in Massachusetts are required to conduct facilities planning to gain approval for plant modification projects from MADEP. Indeed, it is not practical in Massachusetts to access federal or state infrastructure funds for wastewater projects without participating in the state's CWSRF funding process. The CWSRF program has a number of planning and asset management requirements that it puts on all applicants for funding and those could certainly be expanded based on updated climate and resiliency guidance. If an entity wants to gain access to funding, they must adhere to the program's planning requirements. This helps ensure that the projects to be constructed are the right projects and the best use of funds. It is most appropriate to confirm and address vulnerabilities at the same time as plant modification projects are planned and designed. A review of a plant hydraulic profile, which takes into account water elevations during extreme storms, as well as a siting assessment including current flood mapping or proposed mapping changes is part of any responsible professional engineering design plan for wastewater infrastructure. Including requirements in the CWSRF process would also provide a

potential avenue to make such projects eligible for funding, and to incorporate those costs into the overall project costs and municipal appropriations around the upgrades.

If the proposed Major Storm and Flood Events Plan requirements were to remain in the Holyoke or any other NPDES permit, it is doubtful that any permittee in Massachusetts would even consider preparing a Major Storm and Flood Events Plan as described without the assistance of a consultant. Therefore, the time required to budget and appropriate funds for such work, as well as to complete a required procurement process need to be included in any timeframe in addition to the actual study time. While there could be interim deadlines included to ensure a good faith process is moving forward, it would likely take several years to complete the full process and therefore the 12 month timeframe in the draft permit needs to be increased.

As part of our comments, we also request that an example of a completed Major Storm and Flood Events Plan that is consistent with the requirements outlined, for a similarly sized wastewater utility to Holyoke, be provided as part of the response to comments.

Response 34

Regarding the burden and timeframe of the Adaptation Plan requirements, EPA's authority to impose these requirements, and EPA's decision to include these requirements in an NPDES permit rather than via other avenues, see the General Response.

Specifically on the commenter's point regarding CWSRF, EPA acknowledges that a vulnerabilities assessment is appropriate preceding plant upgrade or modification, but also notes that this is not the only time such an assessment is appropriate. As described in the General Response, Adaptation Planning is an important part of ongoing plant operation & maintenance. Many assets are designed to have a lifespan of 20 or 50 years and some plants can go years without major modifications. There can be many changes that happen during that time that must be considered (e.g. change in flood elevations, increase in heavy precipitation events, etc.) and planned for so that the risk to system assets can continue to be mitigated. EPA also notes that the permit's Adaptation Plan requirements do not require a specific timeframe to implement the Adaptation Plan, but rather to create a plan and a schedule. This Plan may be helpful, for instance, when a permittee applies for CWSRF.

Regarding the request for an example Plan, EPA notes that because this permit requirement is new, a sample Plan report is not yet available. However, to assist the permittee and other members of the regulated community, EPA has created a guidance document regarding the development of Adaptation Plans. This guidance document describes EPA's CREAT tool, which can be used to assist in developing the Adaptation Plan. It is EPA's expectation that these tools will enable permittees to develop an Adaptation Plan on their own, without a need to hire external expertise.

F. Comments from Philip D Guerin, President, Massachusetts Coalition for Water Resources Stewardship:

Comment 35

The Massachusetts Coalition for Water Resources Stewardship (MCWRS) is a non-profit organization representing the interests of municipalities, districts and commissions in the world of wastewater, stormwater and drinking water. Members include municipal, district and commission wastewater, stormwater and drinking water utilities, engineering consultants, legal firms and stormwater coalitions.

MCWRS offers the following comments on the EPA Region 1 draft NPDES permit for the City of Holyoke wastewater treatment facility and combined sewer overflows. Our comments are limited to Part 1.C Operation and Maintenance of Treatment and Control Facilities and in particular the WWTF Major Storm and Flood Events Plan and Sewer System Major Storm and Flood Events Plan at Part 1C-1.a and Part 1C-2e(2).

MCWRS is very disappointed to see completely new Major Storm and Flood Events Plan requirements appear in several recently issued draft NPDES permits for Massachusetts cities, towns and districts. This organization has reached out to Region 1 numerous times in the past 15 years asking for open communications and dialogue between your agency and the regulated community. We have asked for discussion on new and evolving NPDES permit concepts before they appear in draft permits so that our members can better understand why these changes are being made and potentially talk about alternative approaches. To our great dismay, MCWRS is once again seeing Region 1 roll out novel requirements in draft permits with no previous discussion or mention. That these storm planning requirements will only apply to communities in Massachusetts and possibly New Hampshire and nowhere else in the nation is truly abysmal. Because EPA retains primacy over NPDES permits in these two states does not give the agency any rights to use the cities and towns in these states as experimental test subjects.

These storm event planning requirements must be removed from the Holyoke permit and all other NPDES permits in Massachusetts and New Hampshire until the need for these requirements are fully vetted, EPA's authority to include these provisions in NPDES permits has been identified, alternative approaches to long-term storm mitigation planning considered and a nationwide approach to this matter has been transparently developed, proposed through a rule making process and implemented nationally. The people of Massachusetts (and New Hampshire) who will pay the tab for NPDES permits compliance should not serve as guinea pigs for another EPA Region 1 overreach.

Response 35

See the General Response.

Regarding the request for advanced notice related to new NPDES permit requirements, see Response 27.

Comment 36

Additional questions and comments related to the storm event planning requirements include:

1. Under what Clean Water Act authority does EPA Region 1 include long range planning of up to 100 years in a NPDES permit? These permits are to control the

discharge of pollutants to the waters of the United States. What discharge or pollutant is being addressed via a 100-year storm event plan?

2. NPDES permits are issued for five (5) year terms. How can a 20-30 year and an 80-100 year planning horizon be included in a five (5) year permit?
3. Holyoke and other recent permittees are required to develop both a WWTF Major Storm and Flood Events Plan and a Sewer System Major Storm and Flood Events Plan that include an Assets Vulnerability Evaluation, a Systems Vulnerability Evaluation and an Alternatives Evaluation within 12 months of the permit effective date. That timeframe for completion and submittal of these detailed plans is outrageous and in most cases impossible to achieve. These plans will require outside engineering consultants and be extreme costly to produce. The short timeframe only adds to the cost which will fall on ratepayers while everyday expenses are spiraling ever higher.
4. Storm event planning as envisioned may have some value to communities but does not belong in a NPDES permit. Such planning appears well-suited to a federal grant program as opposed to an enforcement approach via a permit. EPA should work with Congress to create a funding source and grant program so that every entity with a NPDES permit for WWTFs and CSOs would be automatically eligible for full funding to cover costs of long range storm event plans. These should be specific grants for which only NPDES permittees are eligible and not a competitive grants program with other entities vying for funds.

EPA Region 1 is off the mark with the requirement for storm event planning and mitigation via NPDES permits. This surprising new initiative is inconsistent with the intent of the NPDES program and is an affront to the cities, towns and districts of Massachusetts (and New Hampshire) who should not be subjected to conditions unknown to the rest of the nation. Remove these provisions from the Holyoke permit and other recently issued draft permits and seek a more open and cooperative approach to address such plans that includes full federal funding.

Response 36

See the General Response, Response 33, and Response 34.

G. Comments from Joshua D. Schimmel, Executive Director, Springfield Water and Sewer Commission:

Comment 37

The Springfield Water and Sewer Commission (Commission) is one of the largest public water and wastewater utilities in the Commonwealth, serving approximately 250,000 people in the lower Pioneer Valley. The Commission has been a supportive and communicative partner with state and federal regulatory agencies concerning a broad range of water and wastewater regulatory issues, including those that relate to public health and the impact of climate change on our ability to reliably provide our essential services. The Commission agrees that the changing climate is placing additional stress on aging infrastructure that was designed in a different era for different conditions. More than half of our infrastructure in service today is 75 years old, and 25 percent is greater than 100 years old. Although the Commission agrees that we all should be

planning for, and addressing climate change, we do not understand how the inclusion of provisions that prescribe evaluations and planning scenarios for Major Storm and Flood Events for the next 80-100 years is appropriate or legal for a NPDES Permit. EPA made no apparent attempt to discuss this with any Massachusetts NPDES Permittees prior to the inclusion of these onerous provisions. The failure to initiate a dialogue with permittees and other stakeholders in a transparent and meaningful way is a disservice to the communities we collectively serve and to the environment we all have been dedicated to protecting.

Response 37

See the General Response and Response 31.

Comment 38

The Commission appreciates the opportunity to provide the following comments:

- EPA does not have authority under the NPDES program to require utilities to undertake activities which are entirely divorced from any actual discharges into "waters of the United States,".
- The 5-year NPDES permit cycle is not the vehicle through which long-term advanced mitigation plans can or should be mandated. Requirements in a permit that is only valid for 5 years which force a utility to plan for and address hypothetical scenarios 20-30 and even 80-100 years out violate the plain language of the CWA.
- The Draft Permit's "Operations and Maintenance" Provisions Exceed EPA's Statutory Authority. The CWA provides EPA with authority over the "discharge of a pollutant" by "any person" from any "point source" to a "navigable water."
- EPA points to its own regulations at 40 CFR § 122.41(d), which imposes a "duty to mitigate," that requires permittees to "take all reasonable steps to minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment, but in this case without actually having a discharge in violation of a permit, and whose term is statutorily limited to five years but the violation may occur 100 years from now. This no makes legal or practical sense.
- NPDES provisions require permittees to "properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit", yet EPA fails to point to a single condition of the permit which will be served by the onerous provisions included in this draft permit.
- EPA fails to establish what water quality effluent limitations – either technology- or water quality-based – that the proposed requirements are intended to protect. Under CWA § 301(b)(1), NPDES permits for clean water utilities must include effluent limits based upon secondary treatment technology, which are in no way related to these flooding and resiliency plans.
- EPA's authority does not extend to the imposition of wide-ranging, costly, and infeasible mandates to predict and guard against any hypothetical worst-case flooding or disaster event under the guise of routine "operation and maintenance." Not in the five year permit cycle, nor in the next 100 years as suggested.

- The proposed requirements exceed EPA's general authority to regulate discharges into navigable waters, as such authority does not extend into a permittee's operations. EPA erroneously appears to take the position that, under the umbrella of requiring proper "operations and maintenance" of a facility with a point source discharge, it can regulate anything and everything about that facility, including how it manages asset vulnerabilities, where and how it stores records and equipment, and how it should identify potential funding sources for resiliency projects.
- The costly and onerous provisions in the proposed permit are unreasonable, arbitrary and capricious. Under the Administrative Procedure Act (APA), agency actions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law" must be set aside. 5 U.S.C. § 706(2)(A). Moreover, the regulations upon which EPA relies for its imposition of the permit's burdensome operations and maintenance provisions require only that "reasonable steps" be taken.
- It is also unreasonable to ask utilities to speculate about potential events 100 years from now.
- The Major Storm and Flood Events Plan is Overly Prescriptive with Impracticable Requirements and Unachievable Timelines
- NPDES permits are issued every five years. The draft permit requires permittees to plan and take steps to mitigate 80-100 years, well beyond the expected life of many wastewater assets and is entirely unreasonable.
- Clean water utilities will need more than 12 months to plan and implement plans of this granularity and magnitude. The Commission proposes EPA eliminate the inclusion of these provisions, but if they are included that utilities have at least 36 months to complete both the Wastewater Treatment Facility Major Storm Flood Events Plan and the Sewer System Major Storm and Flood Events Plan. If EPA insists on including these requirements in the final permits, utilities should be afforded more time to implement.
- EPA has not assessed the cost burdens this would place on municipal clean water utilities and how it will effect affordability nor how it will impact other compliance initiatives.
- EPA Must Consider Major Storm and Flood Event Plans Outside of the NPDES Permitting Program

Conclusion

The concern for impacts of climate change is warranted. And few sectors have felt these impacts more than the water sector. The Commission and many other utilities have already initiated many changes to operations, planning, and construction activities to directly address climate change, without any requirement to do so. We have done so because we provide essential services 24/7/365 that the communities we serve rely on. We do not support the inclusion of the aforementioned provisions in this or any other NPDES permits as they will certainly result in unintended consequences that will negatively effect our, and other communities without providing any meaningful benefit. The Commission requests that these provisions be removed from this and all other NPDES permits.

The Commission appreciates the opportunity to comment on this permit and trust that these concerns will be thoughtfully considered. Please contact me directly with any questions.

Response 38

See the General Response.

H. Comments from David W. Coppes, P.E., Chief Operating Officer, Massachusetts Water Resources Authority:

Comment 39

The Massachusetts Water Resources Authority (MWRA) appreciates the opportunity to comment on the U.S. Environmental Protection Agency's (EPA) draft National Pollutant Discharge Elimination System (NPDES) permit number MA0101630 for the Holyoke Water Pollution Control Facility (WPCF) and the accompanying fact sheet (Draft Permit), which were noticed on April 6, 2023. MWRA is providing the following comments in accordance with 40 C.F.R. §124.13.

Response 39

EPA acknowledges this comment.

Comment 40

Comments on Section A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Weekly maximum limits for TSS and BOD

The draft permit includes limits on weekly TSS and BOD loads. MWRA recommends that these be changed to "report only." MWRA notes that maximizing combined flow to the treatment facility is more beneficial to the environment, but is discouraged by weekly mass loading limits.

Response 40

EPA agrees that the weekly average mass-based limits for TSS and BOD may create a disincentive to minimize CSO discharges in this case, contrary to the directive in the CSO Policy to maximize flow to the POTW for treatment. 59 Fed. Reg. 18688, 18691 (April 19, 1994). Inclusion of these weekly mass-based limits for a permittee that has active CSOs (such as Holyoke) could, on occasion, serve as a disincentive to maximize flow to the treatment plant to avoid violating these BOD_5 and TSS weekly mass-based limits. Conversely, removal of these weekly limits allows the Permittee to maximize flow to the WWTF instead of discharging additional untreated wastewater through CSOs. Moreover, retention of the concentration-based weekly TSS and BOD limits would continue to necessitate treatment for TSS and BOD. Further, EPA notes that the technology-based limits for secondary treatment in 40 C.F.R. § 133.102 are concentration-based requirements only, not mass-based. Finally, EPA notes that it has not required weekly average mass-based limits for TSS and BOD for all CSO dischargers in Massachusetts. For example, the current permit for the commenter (MWRA, NPDES Permit No. MA0103284) does not contain such limits.

In order to remove the weekly mass-based limits for TSS and BOD, EPA must consider whether it is permissible under anti-backsliding provisions. The appropriate anti-backsliding analysis depends on the nature of the limit at issue. In this case, although the permit record is unclear, EPA considers the weekly mass-based limits to be technology-based effluent limits (TBELs) as there is no attendant water-quality analysis provided in the record as the basis for the limit. As a TBEL, it is necessarily established pursuant to best professional judgment (BPJ), as there is no effluent limitation guideline (ELG) which establishes weekly mass-based limits for TSS and BOD. Removal of the BPJ-based TBELs would also be based on BPJ, as there is no subsequently promulgated ELG which is the basis for the removal.

The applicable anti-backsliding provision for the removal of BPJ-based TBEL based on BPJ is contained at 40 C.F.R. § 122.44(l), which allows backsliding only if "the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62." One such cause for permit modification contained at 40 C.F.R. § 122.62(a)(15) is "[t]o correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions." EPA considers the inclusion of weekly mass-based TSS and BOD limits for a CSO-WWTF to be a technical mistake in that it may produce an environmentally harmful result by necessitating more flow be released through CSO outfalls rather than directed to the WWTF to receive at least some treatment and a legal mistake in that it contradicts the CSO Policy's directive to maximize flow to the WWTF. EPA also notes that although 40 C.F.R. § 122.45(f) generally directs that effluent limitations should be expressed in terms of mass, one exception is "when applicable standards and limitations are expressed in terms of other units of measurement." Here, the applicable TBEL limitation is contained in the secondary treatment regulations, 40 C.F.R. § 133.102, and expressed in terms of concentration-based only.

For all of the above reasons, EPA concludes it was a mistake to include weekly average mass-based TSS and BOD limits. Therefore, pursuant to the applicable anti-backsliding exception at 40 C.F.R. § 122.44(l) EPA may remove these limits based on its best professional judgment. Further, EPA concludes that removal of this limit will not result in a permit which is less stringent than required by an applicable effluent guideline, as the applicable ELG is concentration-based only, or result in a violation of water quality standards, as this limit was technology-based not water quality-based. 40 C.F.R. § 122.44(l)(ii).

Therefore, EPA has removed the weekly average mass-based limits for TSS and BOD from the Final Permit.

Comment 41

PFAS

MWRA is pleased to see that the quarterly influent, effluent, and sludge sampling for PFAS calls for grab samples rather than composite samples, which is consistent with the requirements of Method 1633.

Response 41

EPA acknowledges this comment.

Comment 42

Adsorbable Organic Fluorine monitoring of influent and effluent

MWRA is concerned that monitoring of Adsorbable Organic Fluorine (AOF) is untested and the data may be impossible to interpret. MWRA recognizes the value of a measurement would cover all of the thousands of possible PFAS compounds as a class. However, the method is not ready for use in NPDES monitoring. The justification in the Fact Sheet does not address any of several issues with the method.

Draft Method 1621 (dated April 2022) states "This document represents a draft of an AOF method currently under development by the EPA Office of Water, Engineering and Analysis Division (EAD). **This method is not approved for Clean Water Act compliance monitoring until it has been proposed and promulgated through rulemaking.**"

Conversely, EPA issued a memo allowing permit writers to include Draft Method 1633 in permits even though it has not been finalized and promulgated. As far as MWRA is aware, no such memo has been issued with respect to Draft Method 1621 and there are some good reasons not to do so.

AOF in aqueous matrices by combustion ion chromatography (CIC) is a "method-defined parameter" defined solely by the method used to determine the analyte. Any changes to the method necessitated by the results of the multi-laboratory validation study or public comments on the method should invalidate any prior data collected using the draft procedure.

EPA is adding this method to permits without having completed the multi-laboratory validation study. There is no way to know what to expect when multiple labs are employed to meet the permit required testing in terms of precision, accuracy, comparability or repeatability.

By requiring measurement of AOF using Method 1621 in the draft NPDES permit, EPA is side-stepping the requirements of the Paperwork Reduction Act instead of following the information collection procedures required by that Act.

The current detection limits are on the order of 5,000 ng/L as F. In addressing concerns about the presence of PFAS at ng/L levels, the analysis will not produce useful results, even aside from questions about precision, accuracy, comparability or repeatability noted above.

MWRA estimates a cost for this analysis of about to $300 - $400 per sample. Permittees may not be able to find laboratories to do this analysis, as there is currently a shortage of labs currently set up to perform this test. At a minimum there would be additional cost related to sample handling and shipping. This cost is an unreasonable burden to put on permittees, especially because the data generated prior to Method 1621 being approved are likely to be unusable for decision-making.

MWRA recommends that the requirement to monitor and report on Adsorbable Organic Fluorine be deleted from the permit. At a minimum, it should be deferred until an available approved method is promulgated.

Response 42

EPA issued a memo on December 6, 2022 related to *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs*. That memo indicates that "The draft Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with draft method 1633, if appropriate." EPA's website[48] currently indicates that multi-lab validation will take place in the summer of 2023. While EPA considers it appropriate to use Method 1621 in conjunction with Method 1633, EPA also agrees with the comment that there are benefits to waiting until Method 1621 is multi-lab validated. Given the expectation that it will be multi-lab validated in the near future, EPA has modified the Final Permit to indicate that monitoring for Adsorbable Organic Fluorine shall begin 6 months after EPA notifies the Permittee that Method 1621 has been multi-lab validated. EPA expects that this additional time will also allow laboratories time to set up to perform this analytical method.

Comment 43

Comments on section B. UNAUTHORIZED DISCHARGES
Unauthorized discharge – public notifications

MWRA agrees with notification of SSOs, however recommends these reporting requirements be consistent with recently implemented MA regulations 314 CMR 16.00. In particular, MWRA suggests that EPA align Part I.B.2 with 314 CMR 16.00.

Response 43

EPA acknowledges the commenter's support for SSO notifications and agrees that Part I.B.2 of the permit should align with the state regulations found at 314 CMR 16.00 to streamline the public notification process. Therefore, EPA has revised Part I.B.2 to reflect the requirements found in 314 CMR 16.00: NOTIFICATION REQUIREMENTS TO PROMOTE PUBLIC AWARENESS OF SEWAGE POLLUTION. The public notification requirement at Part I.B.2 simply requires the basic information identified regarding the unauthorized discharge to be posted on a publicly available website within 24 hours of becoming aware of the discharge. Therefore, EPA clarifies that fulfilling the requirements of 314 CMR 16.00 would also fulfill the requirements of this permit provision. However, EPA notes that simply fulfilling the requirements of this permit provision does not fulfill all the requirements of 314 CMR 16.00. The Permittee must meet all additional requirements of 314 CMR 16.00 based on state regulations beyond the scope of this permit. Please contact massdep.sewagenotification@mass.gov with questions related to compliance with 314 CMR 16.00.

[48] https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas

Comment 44

Comments on section C. OPERATION AND MAINTENANCE OF THE TREATMENT AND CONTROL FACILITIES

Major Storm and Flood Events Plan

The draft permit contains several new requirements relating to planning for flooding events (Sections C.1.a, C.2.e, C.3.g, C.3.h), as well as new requirements for publishing sewer system maps (C.2.d), which MWRA opposes. While MWRA appreciates the importance of planning for climate change and resiliency of the wastewater system, these requirements will impact the ability of utilities to balance investments in the system to ensure its reliable operation.

MWRA, like all utilities, considers natural disasters and other emergencies as part of routine facilities planning. We believe a critical part of these planning efforts is adapting to the impacts of climate change, such as installing flood protection measures at our facilities vulnerable to sea level rise. However, as detailed below, these requirements are onerous and go beyond what is needed for useful, pragmatic planning for climate change. Any new requirements should encourage and support thoughtful development of locally-relevant plans for each permittee, rather than requiring a hasty, expensive, "one size fits all" approach.

The draft permit Fact Sheet section on Operation and Maintenance notes that "*The requirements of 40 CFR § 122.41(d) impose a 'duty to mitigate,' which requires the permittee to "take all reasonable steps to minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment."*

MWRA asserts that the steps EPA has required in the referenced sections are not reasonable. Moreover, EPA has not explained wherefrom it derives the authority to require extensive planning for extreme events. In addition, the requirements are unduly burdensome, raise serious security concerns, and represent an expensive, unfunded mandate. Finally, the requirements are also confusing, inflexible, and not consistent with EPA guidance. An alternative approach similar to emergency planning for drinking water systems in the American Water Infrastructure Act of 2018 (AWIA) would be more appropriate.

Response 44

See the General Response.

Comment 45

The requirements are unduly burdensome.

As the requirement has been inserted into a draft permit, rather than promulgated as a regulation, EPA has not had to calculate the financial burden on permittees. MWRA strongly urges EPA to make this calculation, and publish it for public comment. As written, the development of the plan would require hundreds of staff hours – thousands, in the case of a large or complex system – and is likely to have significant cost implications.

Few, if any, permittees and co-permittees will have the in-house resources to develop the extensive plan described. This will require procuring professional engineering services, at a significant cost, and the number of available firms with expertise in climate change planning is limited.

The costs associated with developing such an extensive plan could result in deferring important projects with a more immediate need. For larger facilities, these costs may be absorbed, but for smaller facilities, the development of a plan on this scale and in the proposed timeframe could have immediate impacts on the permittee's ability to fund other projects. Any rate impacts will be felt by the most vulnerable populations served by the permittee or co-permittee.

Finally, the draft permit's 12 month timeline to develop the plan is much too short. Even aside from the time to complete the plan, municipalities will need time to obtain funding – which may take a year, even assuming rapid approval by Town Meeting or City Council – and then procure the professional services, which adds several more months. If the requirement is retained, a minimum of **36 months** should be provided (24 months for the asset vulnerability evaluation and another 12 months for the mitigation alternatives analysis) to complete the *Wastewater Treatment Facility Major Storm and Flood Events Plan* and the *Sewer System Major Storm and Flood Events Plan*. Additional time will be required to implement a plan.

Response 45

See the General Response for EPA's response on cost, including an explanation of how changes in the Final Permit based on this and other comments may reduce cost. Although EPA has carefully considered cost throughout this permitting process, EPA is not, as the commenter correctly implies, required to formally calculate the cost burden on permittees.

Also see the General Response regarding timing.

Comment 46

The requirements raise security concerns.

The draft permit requires permittees and co-permittees to make a sewer system "map available online in a downloadable Geographic Information System (GIS) format, available to the public, in a manner where the system's performance can be independently assessed and analyzed." No basis is given in the Fact Sheet for this requirement, and there is no explanation of how the permittee can judge whether the map will allow an independent assessment or analysis of system performance. MWRA notes that its security posture towards sensitive data would prohibit making such information generally available. The risk that malicious actors will target utility infrastructure cannot be ignored, as we know from recent news reports about vandalism attacks on electrical equipment.

MWRA notes that America's Water Infrastructure Act (AWIA) of 2018 required drinking water utilities to develop or update risk assessments and emergency response plans (ERPs)[1]. However this requirement differs from this draft permit requirement in several ways:

- The drinking water providers conducted the risk assessment and developed the ERP, but did not submit it to EPA; rather, there is a process for drinking water providers to certify the plans.
- Sensitive information was therefore kept confidential and secure within the utility.
- The requirement was a specific new statutory requirement from Congress, and subject to public comment.
- The ERP was not required to be complete until six months after the risk assessment.
- EPA provided workshops, training and other resources, including online tools, checklists, and template plans.

[1] https://www.epa.gov/waterresilience/awia-section-2013

Response 46

See the General Response.

Comment 47

The requirements represent an unfunded mandate.
The draft permit requires permittees to identify sources of funding. Rather than require permittees to apply for grant funding that may not be provided, EPA should provide guaranteed sufficient funding to create the plans and implement them. In the absence of a dedicated funding source, at a minimum, EPA should conduct the risk assessments for each municipality and regional wastewater utility.

Response 47

Regarding the commenter's concern that these permit requirements represent an unfunded mandate, see the General Response.

EPA has removed the specific requirement for permittees to identify sources of funding for the Adaptation Plan. Creating a funding program is beyond the scope of this NPDES permit proceeding. The permittee may, of course, seek any EPA or other funding or technical assistance that is available and appropriate for this work. Indeed, EPA created its procedures document and encourages use of its CREAT tool to allow permittees to conduct this work at minimal cost.

With regard to EPA conducting the assessments itself, EPA is not in a position to conduct risk assessments for each municipality and regional wastewater utility. It does not have the necessary detailed information regarding the facilities nor the familiarity regarding such infrastructure that would allow for the plans to be as useful as possible. Moreover, it is practically unfeasible for EPA to conduct these plans for all municipalities it permits. EPA has determined these plans are necessary to carry out the goals of the CWA, it would be inappropriate for EPA to wait until it had the resources itself to carry out the work on behalf of the permittee.

For EPA's general response to issues concerning cost and information about possible funding, see the General Response.

Comment 48

The requirements are confusing, inflexible, and not consistent with EPA guidance.

Wastewater utilities and public works departments consider natural disasters and other emergencies as part of routine facilities planning. Using local expertise, plans are tailored to the particular circumstances of their municipality and region. The requirement in the draft permit is a "one size fits all" approach that will result in wasted resources.

EPA cites flood resiliency guidance[2] and risk assessment tools in its Creating Resilient Water Utilities program[3]. The guidance documents cited are more reasonable than the language in the permit.

The language of the requirements is confusing. In one of the many footnotes, EPA directs permittees to use "at a minimum, the worst-case data" which makes little sense; the same footnote requires using a variety of climate projection sources, which very likely conflict (particularly for more distant dates) and are subject to change over time. The same footnote requires "Evaluation must be completed by a qualified person", without defining who is a qualified person.

There is a requirement to revise plans "as data sources used for such evaluations are revised or generated" which is beyond the control of the permittee, and could result in nearly constant (costly) reevaluation.

Requiring a permitting horizon of 40 years and beyond is unreasonable; there is too much uncertainty in climate predictions to adequately assess risk and propose mitigation measures in longer time frames. NPDES permits are five year permits; the draft permit requires permittees to plan out 80-100 years. The expected life of many wastewater assets is closer to 20 years. This exercise is misplaced as part of a 5-year permit.

Additionally, the requirement to develop a flood events plan and mitigation measures for 80-100 years in the future ignores that adaptation planning for the extremes of climate change possible in 2100 and beyond requires iterative collaboration between the surrounding municipalities. The decisions a permittee makes to protect against extreme sea level rise, for example, are directly related to the measures taken by the entire region. A facility might be protected from rising waters, but if the adjacent communities fail to build adaptive infrastructure, the areas outside the facility would be flooded, making it inaccessible. While facility-specific mitigation measures like flood barriers are pragmatic for mid-term planning, long-term planning requires a region-wide approach, which goes beyond the scope of this permit.

Annual reporting, besides being subject to the same security concerns mentioned above, is excessive for long-term planning. If progress reporting is required, a five-year cycle seems more appropriate.

[2]https://www.epa.gov/sites/default/files/2015-08/documents/flood_resilience_guide.pdf
[3]https://www.epa.gov/crwu

Response 48

See the General Response.

Additionally, the comment suggests that a "one-size-fits-all" approach is not appropriate because each municipality or region is unique. EPA agrees that the plans for each municipality should and will likely be unique. However, to ensure fairness and because of the commonality of the general threats posed by increased flooding and storm events, the permit requirements to guide the development of those unique plans can and should be consistent for similar facilities. As described in the General Response, EPA has changed the Final Permit requirements in a way which will allow permittees more leeway to develop their own Adaptation Plans within the general parameters of the permit requirements.

Comment 49

A more well thought out approach would be more effective.
Examples of a less prescriptive, more effective approach are available, for example:

- State Revolving Fund loans require utilities to develop an asset management program.
- AWIA Risk and Resilience Assessments and Emergency Response Plans are kept on file at the utilities to protect security-sensitive information that could be exposed if plans are submitted to EPA.
- Community water systems may use any standards, methods or tools provided risk and resilience assessment and emergency response plan fully address AWIA requirements.

Rather than require the same onerous procedures for all municipalities as part of a NPDES permit, EPA should work collaboratively with those permittees whose systems are at highest risk from flooding under present and future climate conditions.

Response 49

Regarding alternative approaches, see the General Response.

EPA will require Adaptation Plans be developed under NPDES permits for all wastewater treatment plants in Massachusetts because, as described in the General Response, resilience planning is an important aspect of operation & maintenance and compliance with effluent limitations. The comment presupposes that certain facilities are at relatively lower risk of flooding and therefore should not be subject to Adaptation Plan requirements, but in fact fulfillment of the Adaptation Plan requirements is a way for permittees and EPA to ascertain the risk to WWTSs and/or sewer systems. Additionally, although the Adaptation Plan requirements will be the same for all permits, the individual plans developed under those requirements will necessarily be tailored to site-specific conditions and may require less planning for facilities at relatively lower risk of flooding or other adverse impacts from major storm events, for example if fewer critical assets are vulnerable. Notably, the impacts that must be considered are not limited to flooding-impacts as the comment implies, but also storm events other than flooding which may adversely impact systems (e.g., collection pipes overwhelmed by heavy inflow, etc.).

Comment 50

Comments on section H. COMBINED SEWER OVERFLOWS (CSOs)

Part I.H.3.g(2) Combined Sewer Overflow Public Notification

It is unclear if EPA intends to allow the permittee a period of time to confirm that a CSO has activated before the two hour public notification clock starts. Alternately, MassDEP has made clear in 314 CMR 16.04(5)(a) that permittees have a set window (contingent on the method of discovery and how the facility operates) to confirm that a discharge has occurred. Once a discharge has been confirmed, 314 CMR 16.04(4) requires the permittee to issue a public notification within two hours. Permittees have put forth considerable effort and resources toward developing public notification programs in accordance with 314 CMR 16.00. This lack of clarity will create confusion and potentially inconsistent requirements for public notification.

MWRA suggests EPA modify the language of Part I.H.3.g(2) to state the permittee must issue an initial public notification of a CSO activation in accordance with the requirements of 314 CMR 16.04.

Response 50

EPA notes that the language in Part I.H.3.g(2) indicates "Initial notification of a *probable* CSO activation shall be provided to the public as soon as practicable, but no later than, two (2) hours *after becoming aware* by monitoring, modeling or other means that a CSO discharge *may* have occurred." (emphasis added) The Permittee must provide initial public notification within 2 hours of becoming aware that a probable CSO activation may have occurred. Given the potential for CSO discharges to impact public health in a very short timeframe, this requirement does not provide additional time beyond those 2 hours to confirm a CSO has occurred. If it is determined after this initial notification that a CSO activation has not occurred, the Permittee should provide subsequent notice as soon as practicable.

EPA also notes that Massachusetts regulations at 314 CMR 16.04(4) states that "A permittee required by 314 CMR 16.03 to issue public advisory notifications shall do so as soon as possible, but **no later than two hours, after discovery** of a discharge or overflow." While 314 CMR 16.04(5) allows additional time to confirm a discharge has occurred, that time does not extend the 2 hours notification requirement.

This comment does not result in any change to the Final Permit.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY – REGION 1 (EPA)
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MASSDEP)
COMMONWEALTH OF MASSACHUSETTS
100 CAMBRIDGE STREET, SUITE 900
BOSTON, MASSACHUSETTS 02114

EPA **EXTENSION OF PUBLIC NOTICE** OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTION 402 OF THE CLEAN WATER ACT (CWA), AS AMENDED, AND MASSDEP PUBLIC NOTICE OF EPA REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CWA.

PUBLIC NOTICE PERIOD: **April 6, 2023 – May 5, 2023**

PUBLIC NOTICE EXTENDED TO: **June 5, 2023**

NAME AND MAILING ADDRESS OF APPLICANT:

City of Holyoke
Department of Public Works
63 Canal Street
Holyoke, MA 01040

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Holyoke Water Pollution Control Facility
1 Berkshire Street
Holyoke, Massachusetts 01040

And

Combined Sewer Overflow (CSO) discharges at 10 locations

RECEIVING WATER AND CLASSIFICATION:

Connecticut River (Class B)

PREPARATION OF THE DRAFT PERMIT AND EPA REQUEST FOR CWA § 401 CERTIFICATION:

EPA is issuing for public notice and comment the Draft NPDES Permit for the Holyoke WPCF, which discharges treated domestic and industrial wastewater. Sludge from this facility is transported to the Synagro facility in Waterbury, CT for incineration. The effluent limits and permit conditions have been drafted pursuant to, and assure compliance with, the CWA, including EPA-approved State Surface Water Quality Standards at 314 CMR 4.00. MassDEP cooperated with EPA in the development of the Draft NPDES Permit. MassDEP retains independent authority under State law to publish for public notice and issue a separate Surface Water Discharge Permit for the discharge, not the subject of this notice, under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53.

In addition, EPA has requested that MassDEP grant or deny certification of this Draft Permit pursuant to Section 401 of the CWA and implementing regulations. Under federal regulations governing the NPDES program at 40 Code of Federal Regulations (CFR) § 124.53(e), state certification shall contain conditions

that are necessary to assure compliance with the applicable provisions of CWA sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law, including any conditions more stringent than those in the Draft Permit that MassDEP finds necessary to meet these requirements. Furthermore, MassDEP may provide a statement of the extent to which each condition of the Draft Permit can be made less stringent without violating the requirements of State law.

INFORMATION ABOUT THE DRAFT PERMIT:

The Draft Permit and explanatory Fact Sheet may be obtained at no cost at https://www.epa.gov/npdes-permits/massachusetts-draft-individual-npdes-permits or by contacting:

Michele Duspiva
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-4)
Boston, MA 02109-3912
Telephone: (617) 918-1682
Email: duspiva.michele@epa.gov

Following U.S. Centers for Disease Control and Prevention (CDC) and U.S. Office of Personnel Management (OPM) guidance and specific state guidelines impacting our regional offices, EPA's workforce has been directed to telework to help prevent transmission of the coronavirus. While in this workforce telework status, there are practical limitations on the ability of Agency personnel to allow the public to review the administrative record in person at the EPA Boston office. However, any electronically available documents that are part of the administrative record can be requested from the EPA contact above.

PUBLIC COMMENT AND REQUESTS FOR PUBLIC HEARINGS:

All persons, including applicants, who believe any condition of this Draft Permit is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by June, 5, 2023, which is the close of the public comment period. Comments, including those pertaining to EPA's request for CWA § 401 certification, should be submitted to the EPA contact at the address or email listed above. Upon the close of the public comment period, EPA will make all comments available to MassDEP. All commenters who want MassDEP to consider their comments in the state decision-making processes (i.e., the separate state permit and the CWA § 401 certification) must submit such comments to MassDEP during the state comment period for the state Draft Permit and CWA § 401 certification. For information on submitting such comments to MassDEP, please follow the instructions found in the state public notice at: https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities.

Any person, prior to the close of the EPA public comment period, may submit a request in writing to EPA for a public hearing on the Draft Permit under 40 CFR § 124.10. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice if the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this Draft Permit, the Regional Administrator will respond to all significant comments and make the responses available to the public.

Due to the COVID-19 National Emergency, if comments are submitted in hard copy form, please also email a copy to the EPA contact above.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and notify the applicant and each person who has submitted written comments or requested notice.

KEN MORAFF, DIRECTOR
WATER DIVISION
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY – REGION 1

LEALDON LANGLEY, DIRECTOR
DIVISION OF WATERSHED MGMT
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION