# 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 Portsmouth, New Hampshire**

is authorized to discharge from the facility located at

**Pease Wastewater Treatment Facility**
**135 Corporate Drive**
**Portsmouth, NH 03801**

to receiving water named

**Piscataqua River, (USGS Hydrologic Unit Code: 01060003)**
**Piscataqua-Salmon Falls River Basin**

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 August 8, 2000.

This permit consists of **Part I** including the cover page(s), **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012), **Attachment B** (Pretreatment Program Development and Approval Standard Requirements), **Attachment C** (Industrial Pretreatment Program 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: 2022.08.08 08:49:17 -04'00'

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

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

**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 005 to Piscataqua 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] | 1.2 MGD[5] | --- | --- | Continuous | Recorder |
| Rolling Average Effluent Flow[5] | 1.77 MGD[5] | --- | --- | Continuous | Recorder |
| Effluent Flow[5] | Report MGD | --- | Report MGD | Continuous | Recorder |
| $BOD_5$ | 30 mg/L<br>300 lb/day | 45 mg/L<br>450 lb/day | 50 mg/L<br>500 lb/day | 2/Week | Composite |
| $BOD_5$ Removal | ≥ 85 % | --- | --- | --- | Calculation |
| TSS | 30 mg/L<br>300 lb/day | 45 mg/L<br>450 lb/day | 50 mg/L<br>500 lb/day | 2/Week | Composite |
| TSS Removal | ≥ 85 % | --- | --- | --- | Calculation |
| pH Range[6] | 6.5 - 8.0 S.U. | | | 1/Day | Grab |
| Total Residual Chlorine[7,8] | 0.75 mg/L | --- | 1.0 mg/L | 2/Day | Grab |
| *Enterococci* [7,8] | 35/100 mL | --- | 104/100 mL | 1/Day | Grab |
| Fecal Coliform[7,8] | 14/100 mL | --- | Report/100 mL | 1/Day | Grab |
| Fecal Coliform[7,8,9]<br>(% of samples > 28/100 mL) | --- | --- | ≤ 10 % | 1/Day | Grab |
| Total Arsenic[10] | 0.22 lb/day<br>Report µg/L | --- | Report µg/L | 2/Month | Composite |
| Inorganic Arsenic[10] | --- | --- | Report µg/L | 2/Year | Composite |
| PFAS Analytes[11] | --- | --- | Report ng/L | 1/Quarter | Composite |

| **Whole Effluent Toxicity (WET) Testing**[12,13] | **Reporting Requirements** | | | **Monitoring Requirements**[1,2,3] | |
|---|---|---|---|---|---|
| | **Average Monthly** | **Average Weekly** | **Maximum Daily** | **Measurement Frequency** | **Sample Type**[4] |
| $LC_{50}$ | --- | --- | ≥ 50 % | 2/Year | Composite |
| Ammonia Nitrogen | --- | --- | Report mg/L | 2/Year | Composite |
| Total Cadmium | --- | --- | Report mg/L | 2/Year | Composite |
| Total Copper | --- | --- | Report mg/L | 2/Year | Composite |
| Total Nickel | --- | --- | Report mg/L | 2/Year | Composite |
| Total Lead | --- | --- | Report mg/L | 2/Year | Composite |
| Total Zinc | --- | --- | Report mg/L | 2/Year | Composite |
| Total Organic Carbon | --- | --- | Report mg/L | 2/Year | Composite |

| **Ambient Characteristic**[14] | **Reporting Requirements** | | | **Monitoring Requirements**[1,2,3] | |
|---|---|---|---|---|---|
| | **Average Monthly** | **Average Weekly** | **Maximum Daily** | **Measurement Frequency** | **Sample Type**[4] |
| Total Suspended Solids | --- | --- | Report mg/L | 2/Year | Grab |
| Ammonia Nitrogen | --- | --- | Report mg/L | 2/Year | Grab |
| Salinity | --- | --- | Report ppt | 2/Year | Grab |
| Total Cadmium | --- | --- | Report mg/L | 2/Year | Grab |
| Total Copper | --- | --- | Report mg/L | 2/Year | Grab |
| Total Nickel | --- | --- | Report mg/L | 2/Year | Grab |
| Total Lead | --- | --- | Report mg/L | 2/Year | Grab |
| Total Zinc | --- | --- | Report mg/L | 2/Year | Grab |
| Total Organic Carbon | --- | --- | Report mg/L | 2/Year | Grab |
| pH[15] | --- | --- | Report S.U. | 2/Year | Grab |
| Temperature[15] | --- | --- | Report °C | 2/Year | Grab |
| Total Arsenic[10] | --- | --- | Report µg/L | 2/Year | Composite |
| Inorganic Arsenic[10] | --- | --- | Report µg/L | 2/Year | Composite |

| **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 | Composite |

| **Sludge Characteristic** | **Reporting Requirements** | | | **Monitoring Requirements[1,2,3]** | |
|---|---|---|---|---|---|
| | **Average Monthly** | **Average Weekly** | **Maximum Daily** | **Measurement Frequency** | **Sample Type[4]** |
| PFAS Analytes [16] | --- | --- | Report ng/g | 1/Quarter | Composite[17] |

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 the State of any additional testing above that required herein, if testing is in accordance with 40 CFR Part 136. Effluent samples shall be collected at a point prior to mixing with any other waste stream, including the effluent from the Town of Newington WWTF.

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 to either 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 several 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.

The rolling average flow limit of 1.2 MGD shall remain in effect until completion of facility expansion, whereupon the rolling average flow limit of 1.77 MGD shall go into effect. See Part I.H.1., I.I.5., and I.I.7., below regarding notification of completion of facility expansion.

Until the facility expansion is complete, the Permittee shall report the No Discharge Indicator Code (NODI) of "9" (conditional not needed) on the monthly DMRs for the flow limit of 1.77 MGD. Upon completion of the facility expansion, the Permittee shall report the No Discharge Indicator Code (NODI) of "9" for the flow limit of 1.2 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.). See Part I.H.2 below for a provision to modify the pH range.

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.

   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 and in accordance with any more frequent reporting requirements in Part II Standard Conditions. 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 *Enterococci* and Fecal Coliform is expressed as a geometric mean. *Enterococci* and Fecal Coliform monitoring shall be conducted concurrently with TRC monitoring, if TRC monitoring is required. The *Enterococci* limits shall become effective one year from the effective date of the Final Permit.

   See Part I.H.3 for conditions of the *Enterococci* compliance schedule.

9. The Daily Maximum limit is expressed as not more than 10% of the collected samples (over a monthly period) shall exceed a Most Probable Number (MPN) of 28 per 100 mL. Each month the percentage of collected samples that exceed an MPN of 28 per 100 mL shall be reported as the Daily Maximum value. Furthermore, all Fecal Coliform data collected must be submitted with the monthly Discharge Monitoring Reports (DMRs).

   See Part I.J.9 below for additional fecal coliform State 401 Certification Conditions.

10. Total arsenic and inorganic arsenic monitoring of the effluent and ambient shall be conducted twice per year on the same day as the Whole Effluent Toxicity testing in the

calendar quarters ending June 30th and September 30th. Total arsenic shall be measured using EPA Method 200.8. Inorganic arsenic shall be measured using EPA Method 1632.

11. Report in nanograms per liter (ng/L). 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 PFAS analytes takes effect the first full calendar quarter following 6 months after EPA notifies the permittee that an EPA multi-lab validated method for wastewater is available.

12. The Permittee shall conduct acute toxicity tests ($LC_{50}$) in accordance with test procedures and protocols specified in **Attachment A** of this permit. $LC_{50}$ is defined in Part II.E. of this permit. The Permittee shall test the inland silverside minnow, *Menidia beryllina*, and the mysid shrimp, *Americamysis bahia*. Toxicity test samples shall be collected and tests completed during the same weeks each time of calendar quarters ending June 30th and September 30th. 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. See Part I.H.4 which specifies retest requirements and conditions under which a Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) must be conducted.

13. 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.

14. 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 during outgoing tide 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.

15. 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.

16. Report in nanograms per gram (ng/g). 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 PFAS analytes takes effect the first full calendar quarter following 6 months after EPA notifies the permittee that an EPA multi-lab validated method for sludge is available.

17. 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.

**Part I.A., continued.**

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

3. The discharge shall be free from substances in kind or quantity that settle to form harmful benthic deposits; float as foam, debris, scum or other visible substances; produce odor, color, taste or turbidity that is not naturally occurring and would render the surface water unsuitable for its designated uses; result in the dominance of nuisance species; or interfere with recreational activities.

4. Tainting substances shall not be present in the discharge in concentrations that individually or in combination are detectable by taste and odor tests performed on the edible portions of aquatic organisms.

5. The discharge shall not result in toxic substances or chemical constituents in concentrations or combinations in the receiving water that injure or are inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife that might consume aquatic life.

6. The discharge shall not result in benthic deposits that have a detrimental impact on the benthic community. The discharge shall not result in oil and grease, color, slicks, odors, or surface floating solids that would impair any existing or designated uses in the receiving water.

7. The discharge shall not result in an exceedance of the naturally occurring turbidity in the receiving water by more than 10 NTUs.

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. In accordance with 40 CFR § 122.44(j)(1), the Permittee must identify, in terms of character and volume of pollutants contributed from 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.

10. 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.

## B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall listed in Part I.A.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.(1) (24-hour reporting). See Part I.I below for reporting requirements.

2. The Permittee must provide notification to the public within 24 hours of becoming aware of any unauthorized discharge, except SSOs that do not impact a surface water or the public, on a publicly available website, and it shall remain on the website for a minimum of 12 months. Such notification shall include the location (including latitude and longitude) and description of the discharge; estimated volume; 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.

## C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance (O&M) of the sewer system shall be in compliance with the Standard Conditions of Part II and the following terms and conditions. The Permittee shall complete the following activities for the collection system which it owns:

1. 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 Collection System O&M Plan required pursuant to Section C.5. below.

2. 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 Collection System O&M Plan required pursuant to Section C.5. below.

3. 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 Collection System O&M Plan required pursuant to Section C.5. below.

4. Collection System Mapping

Within 30 months of the effective date of this permit, the Permittee shall prepare a map of the sewer collection system it owns. The map shall be on a street map of the community, with sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up-to-date and available for review by federal, state, or local agencies. Such map(s) shall include, but not be limited to the following:

a. All sanitary sewer lines and related manholes;

b. All combined sewer lines, related manholes, and catch basins;

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

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

e. All pump stations and force mains;

f. The wastewater treatment facility(ies);

g. All surface waters (labeled);

h. Other major appurtenances such as inverted siphons and air release valves;

i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;

j. The scale and a north arrow; and

k. To the extent feasible, the pipe diameter, date of installation, type of material, distance between manholes, interconnections with collection systems owned by other entities, and the direction of flow shall be provided. If certain information is determined to be infeasible to obtain, a justification must be included along with the map. If EPA disagrees with the assessment, it may require the map to be updated accordingly.

5. Collection System O&M Plan

The Permittee shall develop and implement a Collection System O&M Plan.

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

(1) A description of the collection system management goals, staffing, information management, and legal authorities;

(2) 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

(3) A schedule for the development and implementation of the full Collection System O&M Plan including the elements in paragraphs b.1. through b.8. below.

b. The full Collection 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:

(1) The required submittal from paragraph 5.a. above, updated to reflect current information;

(2) A preventive maintenance and monitoring program for the collection system;

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

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

(5) 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;

(6) 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;

(7) An educational public outreach program for all aspects of I/I control, particularly private inflow; and

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

6. Annual Reporting Requirement

The Permittee shall submit a summary report of activities related to the implementation of its Collection System O&M Plan 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 collection system O&M Plan required by Part I.C.5.b. 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; and

## 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. PRETREATMENT PROGRAM DEVELOPMENT

Within eighteen (18) months of the effective date of the permit, the Permittee shall submit a completed pretreatment program to the Director for approval. The proposed pretreatment program must satisfy the requirements of 40 CFR Section 403.8 and the Permittee's request for approval must conform to the requirements of 40 CFR Section 403.9. Additionally, the submittal should be consistent with **Attachment B** (Pretreatment Program Development and Approval Standard Requirements)

1. A pretreatment program submitted for approval shall contain the following:

a. Development of 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 270 days of the effective date of this permit, the permittee shall prepare and submit a written technical Local Limit report to the EPA. As part of this report, 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. The Permittee shall carry out the Local Limits report in accordance with EPA's Local Limit Development Guidance (July 2004).

b. An evaluation by the City Solicitor, or a public official acting in a comparable capacity, of the legal authority of the permittee to apply and enforce the requirements of Sections 307(b), 307(c) and 402(b)(8) of the Clean Water Act. In accordance with 40 CFR Section 403.8(f)(1), this evaluation shall specifically address the Permittee's authority to:

(1) Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants to the POTW by industrial users;

(2) Require compliance with applicable pretreatment standards and requirements by industrial users;

(3) Control, through permit, contract, order, or similar means, the contribution to the POTW by each industrial user to ensure compliance with applicable pretreatment standards and requirements;

(4) Require (A) the development of a compliance schedule by each industrial user for the installation of facilities 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 40 CFR Section 403.12;

(5) 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. Representatives of the POTW shall be authorized to enter any premises of any industrial user in which an effluent source or treatment system is located or in which records are required to be kept under 40 CFR Section 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 Clean Water Act; and

(6) Obtain remedies including injunctive relief (such as discharge termination) and

assessment of penalties for non-compliances with any pretreatment standard or requirement or for violation of any of the program requirements set forth in subparagraphs (1) through (5) above.

c. Where the City Solicitor or comparable public official finds that the Permittee does not have the authority outlined above, the Permittee shall identify what additional authority is needed and submit a plan and schedule for obtaining it by the program submittal date;

2. The pretreatment program submitted for approval shall contain the following:

   a. An evaluation of staffing needs and funding to implement its pretreatment program. An estimate of personnel needed to 1) establish and track schedules of compliance, 2) receive and analyze monitoring reports, 3) conduct independent sampling and analysis as necessary, 4) investigate instances of non-compliance, 5) take enforcement actions, and 6) comply with the public participation requirement of 40 CFR Section 403.8(f)(2)(viii), shall be included. The discussion of funding shall include a description of the sources of funding and an estimate of the program costs;

   b. A discussion of its pretreatment strategy for all of the industries identified. The permittee shall identify the manner in which it will implement the program requirements set forth in 40 CFR Section 403.8, including the means by which pretreatment standards will be applied to individual users (e.g., by Order, Permit, Ordinance, Contract, etc.). This discussion shall include an enforcement response plan to assure industry compliance with local pretreatment requirements, federal prohibited discharge standards, federal categorical pretreatment standards, and the industrial reporting requirements of 40 CFR Sections 403.12(b)-(h);

   c. The design of a monitoring program which will implement the requirements of 40 CFR Sections 403.8 and 403.12, and in particular those requirements referenced in 40 CFR Sections 403.8(f)(1)(iv-v), 403.8(f)(2)(iv-vii), and 403.12(g-j);

   d. A list of additional monitoring equipment required by the POTW to implement the pretreatment program and, a description of municipal facilities to be constructed, if any, for monitoring or analysis of industrial wastes; and

   e. Specific POTW effluent limitations (local limits) for pollutants introduced into the POTW by industrial users which may pass through the POTW of interfere with the operation of performance of the works as required by 40 CFR Section 403.5(c) and 403.8(f)(iii)(B)(3).

3. The Permittee's complete pretreatment program is subject to revisions by EPA during the term of this permit and prior to renewing this permit under Section 301(h) of the Clean Water Act.

## F. INDUSTRIAL USERS AND PRETREATMENT PROGRAM

1. Upon approval by EPA, the Permittee shall implement the approved Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved Pretreatment Program, and the General Pretreatment Regulations, 40 CFR Part 403. At a minimum, the Permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):

    a. Carry out inspection, surveillance, and monitoring procedures 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.

    b. Issue or renew all necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.

    c. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment standard and/or requirement.

    d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

2. The Permittee shall provide EPA and the State 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 § 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 no later than **March 1** of each year.

3. The Permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR § 403.18(c).

4. The Permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal Regulations at 40 CFR § 405 et seq.

5. The Permittee must modify its pretreatment program, if necessary, to conform to all changes in the Federal Regulations that pertain to the implementation and enforcement of the industrial pretreatment program. The Permittee must provide EPA, in writing, within 180 days of this permit's effective date proposed changes, if applicable, to the Permittee's pretreatment program deemed necessary to assure conformity with current Federal Regulations. At a minimum, the Permittee must address in its written submission the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The Permittee will implement these proposed changes pending EPA

Region1's approval under 40 CFR § 403.18. This submission is separate and distinct from any local limits analysis submission described in Part I.E.1.

6. Beginning the first full calendar quarter following 6 months after EPA has notified the Permittee that a multi-lab validated method for wastewater is available, 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 (i.e. bearings)
    - Landfill Leachate
    - Centralized Waste Treaters
    - Known or Suspected PFAS-Contaminated Sites
    - Fire Fighting Training Facilities
    - Airports
    - Any Other Known or Suspected Sources of PFAS

    Sampling shall be for the PFAS analytes listed in Attachment D.

| **Industrial User Effluent Characteristic** | **Maximum Daily** | **Monitoring Requirements** | |
|---|---|---|---|
| | | **Frequency** | **Sample Type** |
| PFAS Analytes | Report ng/L | 1/Year | Composite |

The industrial discharges sampled, and the sampling results shall be summarized and included in the annual report (see Part I.F.2).

## G. 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).

9. Compliance with the requirements of this permit or 40 CFR Part 503 shall not eliminate or modify the need to comply with applicable requirements under RSA 485-A and Env-Wq 800, New Hampshire Sludge Management Rules.

## H. SPECIAL CONDITIONS

1. Completion of Facility Expansion and Startup

   The Permittee shall submit to EPA and NHDES a letter certifying the completion and startup of all facility expansion projects. This letter shall be submitted in accordance with Part I.I.5. and Part I.I.7. of this Permit.

2. Provision to Modify pH Range

   The pH range may be modified if the Permittee satisfies conditions set forth in Part I.J.4 below. Upon notification of an approval by NHDES, EPA will review and, if acceptable, will submit written notice to the Permittee of the permit change. The modified pH range will not be in effect until the Permittee receives written notice from EPA.

3. *Enterococci* Compliance Schedule

   The new effluent limits for *Enterococci* shall be subject to a schedule of compliance whereby the limits take effect one year after the effective date of the permit. For the period starting on the effective date of this permit and ending one (1) year after the effective date, the Permittee shall report the monthly average and daily maximum MPN values for *Enterococci* on the monthly DMR, with the required monitoring frequency of once per day. After this initial one year period, the Permittee shall comply with the limits of an MPN of 35/100mL as a monthly average and an MPN of 104/100mL as a daily maximum ("final *Enterococci* effluent limits").

4. Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE)

The Permittee shall initiate a retest of any WET test when there is an excursion of an acute permit limit within one week of receiving the WET test results. The Permittee shall notify EPA and NHDES that a WET retest is being initiated by calling the numbers in Part I.I.8 below. If the retest fails, the Permittee shall identify and take steps to mitigate the source of toxicity within 30 days. A second retest shall be conducted within 30 days after receiving the results that the first retest failed. If the second retest fails or if the Permittee does not identify the source of the toxicity of the previous two WET tests, the Permittee shall conduct a Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) in accordance with the *EPA Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (August 1999)2 and prepare a TRE/TIE Report summarizing the findings of the evaluation of the findings. Within 30 days following completion of the Report, the Permittee shall submit its TRE/TIE Report(s) to EPA and NHDES in accordance with Part I.I.5.b and Part I.I.7, respectively.

## 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. This includes the NHDES Monthly Operating Reports (MORs). 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

2 EPA's Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999. EPA Document Number: EPA/833B-99/002. https://www.epa.gov/sites/production/files/2016-02/documents/tre.pdf

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.

(5) Letter certifying completion of facility expansion.

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

Unless otherwise specified in this permit or by the State, duplicate signed copies of all reports, information, requests or notifications described in this permit, including the reports, information, requests or notifications described in Parts I.I.3 through I.I.6 shall also be submitted to the New Hampshire Department of Environmental Services, Water Division (NHDES–WD) electronically to the Permittee's assigned NPDES inspector at NHDES-WD or as a hardcopy to the following addresses:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

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
NHDES Assigned NPDES Inspector at 603-271-1493

## J. STATE 401 CERTIFICATION CONDITIONS

1. The Permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification of, or interfere with the uses assigned to, said water by the New Hampshire Legislature (RSA 485-A:12).

2. This NPDES discharge permit is issued by EPA under federal law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a state permit pursuant to RSA 485-A:13.

3. EPA shall have the right to enforce the terms and conditions of this permit pursuant to federal law and NHDES-WD shall have the right to enforce the permit pursuant to state law, if the permit is adopted. Any modification, suspension, or revocation of this permit shall be effective only with respect to the agency taking such action and shall not affect the validity or status of the permit as issued by the other agency.

4. The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the Permittee can demonstrate to NHDES-WD: 1) that the range should be widened due to naturally occurring conditions in the receiving water; or 2) that the naturally occurring receiving water pH is not significantly altered by the Permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR § 133.102(c).

5. Pursuant to New Hampshire Code of Administrative Rules, Env-Wq 703.07(a):

   Any person proposing to construct or modify any of the following shall submit an application for a sewer connection permit to the department:

   a. Any extension of a collector or interceptor, whether public or private, regardless of flow;

   b. Any wastewater connection or other discharge in excess of 5,000 gpd;

   c. Any wastewater connection or other discharge to a WWTP operating in excess of 80 percent design flow capacity or design loading capacity based on actual average flow or loading for 3 consecutive months;

   d. Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity;

   e. Any sewage pumping station greater than 50 gpm or serving more than one building; or

   f. Any proposed sewer that serves more than one building or that requires a manhole at the connection.

6. Pursuant to Env-Wq 305.21, at a frequency no less than every five years, the Permittee shall submit to NHDES:

   a. A copy of its current sewer use ordinance if it has been revised without department approval subsequent to any previous submittal to the department or a certification that

no changes have been made.

b. A current list of all significant indirect dischargers to the POTW. At a minimum, the list shall include for each significant indirect discharger, its name and address, the name and daytime telephone number of a contact person, products manufactured, industrial processes used, existing pretreatment processes, and discharge permit status.

c. A list of all permitted indirect dischargers; and

d. A certification that the municipality is strictly enforcing its sewer use ordinance and all discharge permits it has issued.

7. When the effluent discharged for a period of three (3) consecutive months exceeds 80 percent of the 1.77 MGD design flow (1.42 MGD) or design loading capacity, the Permittee shall submit to the permitting authorities a projection of flows and loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the Permittee may be required to submit plans for facility improvements.

8. Outfall Diffuser Maintenance and Inspection

a. The effluent diffuser shall be maintained as necessary to ensure proper operation. Proper operation means that the plumes from each port will be balanced relative to each other and that they all have unobstructed flow. Maintenance may include dredging in the vicinity of the diffuser, clean out of solids in the diffuser header pipe, removal of debris and repair/replacement of riser ports and duckbill valves.

b. Any necessary maintenance dredging must be performed only after receiving all necessary permits from the NHDES Wetlands Bureau and other appropriate agencies.

c. To determine if maintenance will be required, the Permittee shall have a licensed diver or licensed marine contractor inspect and videotape the operation of the diffuser. The inspections and videotaping shall be performed in accordance with the following schedule:

(1) Every year if no duckbill valves have been installed on the riser ports; or

(2) Every 2 years if duckbill valves have been installed on the riser ports.

d. The video of the diffuser inspection and a copy of a report summarizing the results of the inspection shall be submitted to EPA and NHDES-WD on a USB drive within 60 days of each inspection. A schedule for cleaning, repairs, or other necessary maintenance shall be included in the report if the inspection indicates that it is necessary. Necessary cleaning, repairs, or other maintenance should be documented

with a photo or video taken after the action is completed.

9. NHDES Shellfish Notification Procedures

The Permittee shall immediately notify the Shellfish Section of NHDES-WD of possible high bacteria/virus loading events from the facility or its sewage collection infrastructure. Such events include:

a. Any lapse or interruption of normal operation of the POTW disinfection system, or other event that results in discharge of sewage from the POTW or sewage collection infrastructure (pump stations, sewer lines, manholes, etc.) that has not undergone full disinfection as specified in this permit;

b. Total daily flows in excess of the POTW's rolling annual average flow limit; and

c. Daily post-disinfection effluent sample result of 43 fecal coliform/100 mL or greater. Notification shall also be made for instances where NPDES-required bacteria sampling is not completed, or where the results of such sampling are invalid.

Notification shall be made using the program's cell phone number. If Shellfish Program staff are not available to answer the phone, leave a message describing the issue or situation and provide your contact information, including phone number. Then, call the Shellfish Program’s pager and enter a call back number. Upon initial notification of a possible high bacteria/virus loading event, Shellfish Program staff will determine the most suitable interval for continued notification and updates on an event-by-event basis.

NHDES - Shellfish Program
Cell Phone: 603-568-6741
Pager: 603-771-9826

# Attachment A

## MARINE 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:

- **2007.0 - Mysid Shrimp (Americamysis bahia) definitive 48 hour test.**
- **2006.0 - Inland Silverside (Menidia beryllina) definitive 48 hour test.**

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

## II. METHODS

The permittee shall use the most recent 40 CFR Part 136 methods. Whole Effluent Toxicity (WET) Test Methods and guidance may be found at:

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

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 and receiving water sample shall be collected. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any holding time extension. Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine[1] (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate

[1] For this protocol, total residual chlorine is synonymous with total residual oxidants.

prior to sample use for toxicity testing. If performed on site the results should be included on the chain of custody (COC) presented to WET laboratory.

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 mg/L chlorine. If dechlorination is necessary, a thiosulfate control consisting of the maximum concentration of thiosulfate used to dechlorinate the sample in the toxicity test control water must also be run in the WET test.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol. Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6$^{o}$ C.

## IV. DILUTION WATER

Samples of receiving water must be collected from a reasonably accessible location in the receiving water body immediately upstream of the permitted discharge's zone of influence. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2,Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water is found to be, or suspected to be toxic or unreliable, ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is

species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first case is when repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use by the permittee and toxicity testing laboratory. The second is when two of the most recent documented incidents of unacceptable site dilution water toxicity require ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
Five Post Office Square, Suite 100
Mail Code 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/enforcementandassistance/dmr.html for further important details on alternate dilution water substitution requests.*

## V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA Region 1 requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Americamysis and Menidia toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE MYSID, AMERICAMYSIS BAHIA 48 HOUR TEST**[1]

| | |
|---|---|
| 1. Test type | 48hr Static, non-renewal |
| 2. Salinity | 25ppt ± 10 percent for all dilutions by adding dry ocean salts |
| 3. Temperature ($^{o}$C) | 20$^{o}$C ± 1$^{o}$C or 25$^{o}$C ± 1$^{o}$C, temperature must not deviate by more than 3$^{o}$C during test |
| 4. Light quality | Ambient laboratory illumination |
| 5. Photoperiod | 16 hour light, 8 hour dark |
| 6. Test chamber size | 250 ml (minimum) |
| 7. Test solution volume | 200 ml/replicate (minimum) |
| 8. Age of test organisms | 1-5 days, < 24 hours age range |
| 9. No. Mysids per test chamber | 10 |
| 10. No. of replicate test chambers per treatment | 4 |
| 11. Total no. Mysids per test concentration | 40 |
| 12. Feeding regime | Light feeding using concentrated Artemia naupli while holding prior to initiating the test |
| 13. Aeration [2] | None |
| 14. Dilution water | 5-30 ppt, +/- 10%; Natural seawater, or deionized water mixed with artificial sea salts |
| 15. Dilution factor | ≥ 0.5 |
| 16. Number of dilutions [3] | 5 plus a control. An additional dilution at the permitted effluent concentration (% |

| | |
|---|---|
| | effluent) is required if it is not included in the dilution series. |
| 17. Effect measured | Mortality - no movement of body appendages on gentle prodding |
| 18. Test acceptability | 90% or greater survival of test organisms in control solution |
| 19. Sampling requirements | For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection. |
| 20. Sample volume required | Minimum 1 liter for effluents and 2 liters for receiving waters |

Footnotes:

[1] Adapted from EPA 821-R-02-012.

[2] If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.

[3] When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

**EPA NEW ENGLAND TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST[1]**

| | |
|---|---|
| 1. Test Type | 48 hr Static, non-renewal |
| 2. Salinity | 25 ppt ± 10 % by adding dry ocean salts |
| 3. Temperature | 20°C ± 1°C or 25°C ± 1°C, temperature must not deviate by more than 3°C during test |
| 4. Light Quality | Ambient laboratory illumination |
| 5. Photoperiod | 16 hr light, 8 hr dark |
| 6. Size of test vessel | 250 mL (minimum) |
| 7. Volume of test solution | 200 mL/replicate (minimum) |
| 8. Age of fish | 9-14 days; 24 hr age range |
| 9. No. fish per chamber | 10 (not to exceed loading limits) |
| 10. No. of replicate test vessels per treatment | 4 |
| 11. Total no. organisms per concentration | 40 |
| 12. Feeding regime | Light feeding using concentrated Artemia nauplii while holding prior to initiating the test |
| 13. Aeration[2] | None |
| 14. Dilution water | 5-32 ppt, +/- 10% ; Natural seawater, or deionized water mixed with artificial sea salts. |
| 15. Dilution factor | ≥ 0.5 |
| 16. Number of dilutions[3] | 5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series. |
| 17. Effect measured | Mortality-no movement on gentle prodding. |

| | |
|---|---|
| 18. Test acceptability | 90% or greater survival of test organisms in control solution. |
| 19. Sampling requirements | For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection. |
| 20. Sample volume required | Minimum 1 liter for effluents and 2 liters for receiving waters. |

---

Footnotes:

[1] Adapted from EPA 821-R-02-012.

[2] If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.

[3] When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

V.1. Test Acceptability Criteria

If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.2. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

In general, if reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary as prescribed below.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.2.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥3 standard deviations for IC25s and LC50 values and ≥ two concentration intervals for NOECs or NOAECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

## VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

| Parameter | Effluent | Diluent | Minimum Level for effluent[*1] (mg/L) |
|---|---|---|---|
| pH | x | x | --- |
| Salinity | x | x | ppt(o/oo) |
| Total Residual Chlorine [*2] | x | x | 0.02 |
| Total Solids and Suspended Solids | x | 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 |

Superscript:

[*1] These are the minimum levels for effluent (fresh water) samples. Tests on diluents (marine waters) shall be conducted using the Part 136 methods that yield the lowest MLs.

[*2] Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

-Method 4500-Cl E  Low Level Amperometric Titration (the preferred method);
-Method 4500-CL G DPD Photometric Method.

## VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

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

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

No Observed Acute Effect Level (NOAEL)

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

## VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Toxicity Test summary sheet(s) (Attachment F to the DMR Instructions) which includes:
    - Facility name
    - NPDES permit number
    - Outfall number
    - Sample type
    - Sampling method
    - Effluent TRC concentration
    - Dilution water used
    - Receiving water name and sampling location
    - Test type and species
    - Test start date
    - Effluent concentrations tested (%) and permit limit concentration
    - Applicable reference toxicity test date and whether acceptable or not
    - Age, age range and source of test organisms used for testing
    - Results of TAC review for all applicable controls
    - Permit limit and toxicity test results
    - Summary of any test sensitivity and concentration response evaluation that was conducted

Please note: The NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) are available on EPA's website at http://www.epa.gov/NE/enforcementandassistance/dmr.html

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures;
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s);
- Reference toxicity test control charts;
- All sample chemical/physical data generated, including minimum levels (MLs) and analytical methods used;
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis;
- A discussion of any deviations from test conditions; and
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint.

## Attachment B

## Pretreatment Program Development and Approval Standard Requirements

Within eighteen (18) months of the effective date of the permit, the permittee shall submit to EPA an approved Industrial Pretreatment Program consistent with the requirements of 40 CFR 403.8(f). The Industrial Pretreatment Program submission shall consist of the following chapters:

**Chapter 1** - Organization and Multi-jurisdiction Implementation

This chapter would describe the overall program structure as well as contain descriptions of the treatment plants, collection systems, and the service area including political boundaries.

**Chapter 2** - Legal Authority

This chapter would contain a sewer use ordinance and all multi-jurisdictional agreements consistent with requirements of 40 CFR 403.8(f)(1). The sewer use ordinance shall be submitted as a final draft ready for adoption and implementation pending EPA approval.

**Chapter 3** - Local Limits

This chapter would contain the technical basis for the local limits. It will include the analyses necessary to determine the maximum headworks loadings for the wastewater treatment plant and the maximum pollutant levels protective of the collection system, as well as the method of allocating allowable loadings to the users, a schedule of public hearings and outreach, and the ordinance adoption procedures. Local limitations can be numerical concentrations or loading limits but must be carried out in accordance with EPA's Local Limit Development Guidance (July 2004).

**Chapter 4** - Identification of Non-domestic Users

This chapter would contain the procedures used on-going updates to the Industrial Pretreatment Program. This chapter would also include the current inventory of industrial users, by non-domestic sewer connection, and of any zero-discharging categorical industrial users (if applicable) who comply with their Federal standards by not discharging process wastewaters.

The inventory must indicate the following for each industrial user and zero-discharging categorical industrial user:

1. Whether it qualifies as a significant industrial user;
2. The average and peak flow rates;
3. The SIC code;
4. The pretreatment-in-place, and;
5. The local permit status.

**Chapter 5** - Permits and Fact Sheets

This chapter would describe the permitting procedures and include a fact sheet and final draft permit for each significant industrial user to be issued upon approval of the local limits and revised ordinance by EPA. The fact sheets must indicate the following for each significant industrial user:

1. The industry name, address, owner or plant manager;
2. The permit expiration date (not to exceed five years in duration);
3. A description of the facility including the products made or services provided, building names, the process in each building, and when current operations began;
4. The identification of each sewer connection;
5. A description of the contributing waste streams that comprise each identified non-domestic discharge into the sewers;
6. The pretreatment-in-place for each identified non-domestic discharge to the sewers;
7. The classification by Federal point source category and the reasons justifying this classification;
8. The applicable Federal categorical pretreatment standards (adjusted if necessary to account for dilution), supporting production data (if necessary), and the compliance sampling point(s) where the standards apply;
9. The pollutants of concern and the compliance sampling point(s) where the local limits apply;
10. A site map indicating the locations of all compliance sampling point(s), sewer connections, and sewer laterals;
11. The sampling frequency by regulated pollutant for each compliance sampling point, and the supporting statistical rationale, to ensure that the sampling is representative of the wastewater discharge variability over the reporting period;
12. The sampling protocol by regulated pollutant for each compliance sampling point to ensure that the samples collected to determine compliance with Federal standards are representative of the sampling day's discharge.

**Chapter 6** - Compliance Monitoring

This chapter would describe the industrial user self-monitoring program. The compliance monitoring program must ensure that all sampling is representative over the reporting period and that each sample collected to determine compliance

with Federal standards is representative of the sampling day's discharge. The compliance monitoring program must also set analytical detection limits that are sufficiently below Federal standards and local limits to allow the determination of non-compliance.

**Chapter 7** - Enforcement

This chapter would establish the enforcement response plan to be used to address, at a minimum, each of the following types of violations:

1. Isolated and chronic violations of permit effluent limits;
2. Violations of permit effluent limits that result in any adverse impacts upon the treatment works such as pass-through, interference, sludge contamination, sewer line degradation, explosive or inflammability risks, or worker health and safety risks;
3. Failure to self-monitor or report;
4. The bypassing of pretreatment necessary to comply with permit effluent limits;
5. Dilution as a substitute for treatment necessary to comply with Federal categorical pretreatment standards;
6. The bypassing of compliance sampling or the tampering with sampling equipment;
7. Willful or negligent violations.

**Chapter 8** - Resources

This chapter would cover the budget, staffing and equipment needs of the pretreatment program.

**Chapter 9** - Public Participation and Confidentiality

This chapter would describe the administrative procedures required under 40 CFR 403.8(f)(1)(vii) and 403.8(f)(2)(viii).

**Attachment C**
**Industrial Pretreatment Program Annual Report**

The Permittee shall provide the Approval Authority with an 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, and must include, at a minimum, the applicable required data in Appendix A to 40 CFR Part 127. The report required by this section must also include a summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority and any other relevant information requested by the Approval Authority. As of December 21, 2025 all annual reports submitted in compliance with this section must be submitted electronically by the POTW Pretreatment Program to the Approval Authority or initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR Part 3 (including, in all cases, Subpart D to Part 3), 40 CFR § 122.22, and 40 CFR Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, the Approval Authority 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 submit to Approval Authority and the State permitting authority a report that contains the following information requested by EPA:

1. An updated list of the POTW's Industrial Users by category as set forth in 40 CFR § 403.8(f)(2)(i), to include:
    a. Names and addresses, or a list of deletions and additions keyed to a previously submitted list. The POTW shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical Pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The POTW shall also list the Industrial Users that are subject only to local Requirements. The list must also identify Industrial Users subject to categorical Pretreatment Standards that are subject to reduced reporting requirements under paragraph (e)(3), and identify which Industrial Users are Non-Significant Categorical Industrial Users;
    b. Permit status - Whether each SIU has an unexpired control mechanism and an explanation as to why any SIUs are operating without a current, unexpired control mechanism (*e.g.*, permit);
    c. Baseline monitoring reporting requirements for newly promulgated industries;
    d. In addition, a brief description of the industry and general activities.

2. A summary of compliance and enforcement activities during the preceding year, including the number of:
    a. significant industrial users inspected by POTW (include inspection dates for each industrial user),

b. significant industrial users sampled by POTW (include sampling dates for each industrial user),
c. compliance schedules issued (include list of subject users),
d. written notices of violations issued (include list of subject users),
e. administrative orders issued (include list of subject users),
f. criminal or civil suits filed (include list of subject users) and,
g. penalties obtained (include list of subject users and penalty amounts).

3. 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.

4. The Permittee shall prepare annually a list of industrial users, which during the preceding twelve (12) months have significantly violated Pretreatment Standards or requirements 40 CFR § 403.8(f)(2)(vii). This list is to be published annually in a newspaper of general circulation in the Permittee's service area.

5. A summary of all monitoring activities performed within the previous twelve (12) months. The following information shall be reported:
   a. Total number of SIUs inspected;
   b. Total number of SIUs sampled; and
   c. For all industrial users that were in Significant Non-Compliance during the previous twelve (12) months, provide the name of the violating industrial user; indicate the nature of the violations, the type and number of actions taken (administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. Indicate if the company returned to compliance and the date compliance was attained. Determination of Significant Non-Compliance shall be performed.

6. A summary of all enforcement actions not covered by the paragraph above conducted in accordance with the approved Enforcement Response Plan.
7. A description of actions being taken to reduce the incidence of significant violations by significant industrial users.
8. A detailed description of all interference and pass-through that occurred during the past year.
9. A thorough description of all investigations into interference and pass-through during the past year.
10. 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.
11. The Permittee shall analyze the treatment facility influent and effluent at least annually for the presence of the toxic pollutants listed in 40 CFR Part 122 Appendix D (NPDES Application Testing Requirements) Table III as follows:

    Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Zinc, Cyanide, and Phenols.
    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. All analytical procedures and method detection limits must be specified when reporting the results of such analyses.

12. The Permittee shall analyze the treatment facility sludge (biosolids) prior to disposal, for the presence of toxic pollutants listed above in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table III at least once per year. If the Permittee does not dispose of biosolids during the calendar year, the Permittee shall certify to that in the Pretreatment Annual Report and the monitoring requirements in this paragraph shall be suspended for that calendar year.

    The Permittee shall use sample collection and analysis procedures as approved for use under 40 CFR Part 503 or specified in the EPA Region 8 General Permit for biosolids.

13. The summary shall include an evaluation 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 paragraphs above or any similar sampling program described in this Permit.

14. Identification of the specific locations, if any, designated by the Permittee for receipt (discharge) of trucked or hauled waste, if modified.

15. Information as required by the Approval Authority or State permitting authority on the discharge to the POTW from the following activities:

    a. Groundwater clean-up from underground storage tanks;
    b. Trucked or hauled waste; and
    c. Groundwater clean-up from RCRA or Superfund sites.

16. A description of all changes made during the previous calendar year to the Permittee's pretreatment program that were not submitted as substantial or non-substantial modifications to EPA.

17. 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.

18. Results of all PFAS sampling conducted of industrial discharges in accordance with the Pretreatment Program requirements in Part I of the NPDES permit.

19. Any other information that may be deemed necessary by the Approval Authority.

## 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 |
| *2H*,*2H*,*3H*,*3H*-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 | |
| $Cl_2$ | 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 |
| $NH_3$-N | Ammonia nitrogen as nitrogen |
| $NO_3$-N | Nitrate as nitrogen |
| $NO_2$-N | Nitrite as nitrogen |
| $NO_3$-$NO_2$ | 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. NH0109000**
**PEASE WASTEWATER TREATMENT FACILITY**
**PORTSMOUTH, NEW HAMPSHIRE**

The U.S. Environmental Protection Agency's New England Region (EPA) is issuing a Final National Pollutant Discharge Elimination System (NPDES) Permit for the Pease Wastewater Treatment Facility (WWTF) located in Portsmouth, New Hampshire. 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 (CFR) §124.17, this document presents EPA's responses to comments received on the Draft NPDES Permit # NH0109000 ("Draft Permit"). The Response to Comments explains and supports EPA's determinations that form the basis of the Final Permit. From March 31, 2022 through May 16, 2022, solicited public comments on the Draft Permit.

EPA received comments from:

- City of Portsmouth, dated May 16, 2022
- City of Dover, New Hampshire, dated May 16, 2022
- New Hampshire Water Pollution Control Association, dated May 16, 2022
- Conservation Law Foundation, dated May 16, 2022

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. EPA provides a summary of the changes made in the Final Permit below. 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: https://www.epa.gov/npdes-permits/new-hampshire-npdes-permits.

A copy of the Final Permit may be also obtained by writing or calling Meridith Finegan, USEPA, 5 Post Office Square, Suite 100 (Mail Code: 06-4), Boston, MA 02109-3912; Telephone: (617) 918-1533; Email finegan.meridith@epa.gov.

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## I. Summary of Changes to the Final Permit

1. Footnote 8 to Table I.A.1. has been modified to indicate that the *Enterococci* limits shall become effective one year from the effective date of the Final Permit. Interim *Enterococci* monitoring is required during this one-year period. The conditions of the compliance schedule have been added to Part I.H.3 of the Final Permit. See Response 5.

2. The Total Cyanide monitoring requirement has been removed. See Response 9

3. Part I.A.1 has been modified to indicate that WET testing shall be conducted twice per year. Footnote 12 to Part I.A.1 also reflects this change and specifies that WET testes shall be conducted during the calendar quarters ending June 30th and September 30th. See Response 11.

4. Part I.H., Special Conditions, has been revised to include a requirement at Part I.H.4 for the permittee to conduct a Toxicity Reduction Evaluation/Toxicity Identification Evaluation ("TRE/TIE") in the event of any WET test failure. See Response 11.

5. Footnote 1 on Page 5 of Part I.A.1 has been revised to clarify that effluent sampling shall be collected at a point prior to mixing with any other waste stream, including the effluent from the Town of Newington WWTF. See Response 13.

6. The reference to Footnote 13 in Part I.A.1., Influent PFAS Monitoring, has been corrected to reference Footnote 11. See Response 14.

7. Part I.C.4.k has been modified to read as follows: "To the extent feasible, the pipe diameter, date of installation, type of material, distance between manholes, interconnections with collection systems owned by other entities, and the direction of flow shall be provided. If certain information is determined to be infeasible to obtain,

a justification must be included along with the map. If EPA disagrees with the assessment, it may require the map to be updated accordingly". See Response 21.

8. Part I.E and Attachment B of the Final Permit have changed the due date of submittal of the City's pretreatment program to eighteen (18) months after the effective date of the permit. See Response 22.

9. Part I.F.6. has been changed from "Contaminated sites" to "Known or Suspected PFAS-Contaminated Sites". See Response 28.

10. The arsenic optimization requirement in Part I.H has been removed. See Response 29.

11. Chapters 3 and 6 of Attachment B have been modified to remove language not applicable to this permit. See Response 31.

12. Footnote 12 on Page 7 of Part I.A.1. of the Final Permit has been corrected to note that the current WET test protocol lists *Americamysis bahia*, rather than the *Mysidopsis bahia*, as the Mysid shrimp to be tested. See Response 32.

13. Attachment D, which lists the PFAS analytes that are required to be tested, has been included in the Final Permit. See Response 46.

14. Table I.A.1., Effluent Characteristics, Influent Characteristics, and Sludge Characteristics has been modified in the Final Permit to now include monitoring for all of the PFAS Analytes required to be tested in Method 1633, as specified in Attachment D. Part I.F.6 has also been updated to reference Attachment D. See Response 46.

## II. Responses to Comments

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

### A. Comments from Karen S. Conard, City Manager, Portsmouth, New Hampshire on May 16, 2022:

#### Comment 1

We believe the permit should be based upon 149 dilutions rather than 100 dilutions. The Permit should allow the full 149 dilutions for all pollutant parameters. The Fact Sheet includes the following:

> CORMIX modeling by NHDES determined that this change would not affect the dilution factor. Recent CORMIX modeling by NHDES using CORMIX Version 11 resulted in a minimum dilution of 147 at the projected effluent flow of 1.77 MGD. The minimum dilution at the projected effluent flow of 1.77 MGD was 149; however, in accordance

with the NH Method for Determining Dilution Factors for Marine/Estuarine Discharges[9] and Env-Wq 1705.02(b), the maximum dilution factor used for the development of this NPDES permit is 100. The CORMIX session report and prediction files can be found in Appendix B.Env-Wq 1705.02(b) states: **(b)** For tidal waters, the low flow condition shall be equivalent to the conditions that result in a dilution that is exceeded 99% of the time.

EPA should elaborate on how the 100 dilutions was established in accordance with Env-Wq 1705.02(b). The New Hampshire Code of Administrative Rules does not appear to identify any standard other than the one cited above. The City believes that it should be given the full 149 dilutions demonstrated to be available by NHDES' CORMIX modeling for all pollutant parameters and be applied to any dilution-dependent limitation proposed in this Permit.

**Response 1**

As noted in the Fact Sheet, the minimum dilution at the projected effluent flow of 1.77 MGD was 149. However, the maximum dilution factor used for this Draft Permit was 100, in accordance with the *NH Method for Determining Dilution Factors for Marine/Estuarine Discharges*[1] and Env-Wq 1705.02(b). The dilution factor guidance document at page 2 reads as follows:

> The available dilution (from the worst case of the four model runs as described above) will be the lesser of either 1) that obtained at the horizontal distance x = 500 feet downstream of the outfall, 2) that obtained when the predicted plume width is = 50% of the river width, 3) that obtained when the time of travel along the plume centerline < 15 minutes [see below] or 4) a maximum dilution factor of 100.

Therefore, the dilution factor of 100 was determined to be applicable for this discharge.

**Comment 2**

**Monthly Average Flow Limit.** The City objects to the imposition of a monthly average flow limit. As explained below, flow is not a pollutant. It is also unnecessary given the mass and concentration limits imposed (which are based upon maximum design flow into instream drought flow levels).

As the City's DMR flow data demonstrate over many years (the past five years of which are incorporated by reference), peak POTW flows only correspond to wet weather conditions (when instream conditions are also well above drought conditions due to the wet weather events). If EPA disagrees with this conclusion, please identify in the flow data where there were peak POTW flows (above the proposed flow limit – or even the prior flow limit) which occurred during critical conditions or lower stream flows. Those two circumstances (maximum POTW flow into drought receiving stream conditions) simply do not occur together and, accordingly, are not a rational basis for imposing a flow limit.

[1] NH Method for Determining Dilution Factors for Marine/Estuarine Discharges, NHDES 2002.

This fact – that POTW flow cannot exceed design flow during drought conditions – undermines almost all of EPA's arguments in the permit Fact Sheet (see section 2.3) about ensuring that flows beyond design flows are not discharged during "worst case conditions". If that is truly EPA's concern, then EPA could simply tailor the effluent flow limit to apply only when instream flow conditions are at or below the "worst case conditions" on which the permit effluent limits are derived. The City would gladly accept such a condition. Peak POTW flows are simply not an issue during worst case design (drought) instream conditions. EPA cannot point to any data for this facility which shows peak flows during anything close to instream drought conditions.

Significantly, while POTW flows and low flow instream conditions are mutually exclusive, EPA's monthly average limit does not actually prevent a higher daily POTW flow during drought conditions (if such a condition were possible, which it is not). For example, the monthly average limit could allow daily flows at 3, 4, or 5 times the facility's design flow during one day or even over a series of days while the facility could still meet the monthly average flow limitation. Thus, a concern about higher POTW flows during drought/"worst case" conditions is not a rational basis to impose a flow limit. The fact that EPA issues NPDES permits without flow limits (such as for the Blue Plains facility in Washington, DC as well as all POTW Permits in Idaho) further reinforces that flow limits are unnecessary to protect water quality. See the DC Water Blue Plains NPDES Permit, Fact Sheet, and Response-to-Comments document here: https://www.epa.gov/npdes-permits/district-columbia-npdes-permits.

EPA also asserts that its flow limits serve to control inflow and infiltration in the collection system. That is not legally valid for several reasons including (1) Paragraph 3 on Page 10 of the permit speaks specifically to controlling inflow and infiltration to prevent sewer overflows and permit exceedances due to excessive inflow and infiltration; (2) the provision on Page 22 (5.c) which limits flows that can be accepted by POTWs which are operating in excess of 80 percent of their design loading, and (3) page 22, Paragraph 7 which also specifically addresses POTW capacity assurance. See also, Fact Sheet Section 5.4. EPA does not need a general flow limit to ensure against POTW and collection system capacity exceedances when these specific provisions are imposed.

Finally, the City questions EPA's legal authority to limit the flow that can be discharged from a POTW. In one of the most significant Clean Water Act decisions in the last thirty years, the U.S. District Court for the Eastern District of Virginia issued an opinion holding that EPA lacks authority under the Clean Water Act to regulate flow in a TMDL. Fairfax County and the Virginia Department of Transportation (VDOT) appealed a TMDL issued by EPA establishing flow limits for Accotink Creek in Northern Virginia. The flow limits were intended to reduce the amount of sediment in the creek. Fairfax and VDOT successfully argued that the Clean Water Act clearly denies EPA the authority to regulate flow, even as a surrogate for a pollutant such as sediment. United States District Court Judge Liam O'Grady conducted an analysis under *Chevron* Step 1, concluding that, under the plain language of the statute, EPA unambiguously does not have authority to establish TMDLs for non-pollutants, such as flow, as surrogates for pollutants. The court invalidated any interpretation of EPA's regulations that would allow the agency to regulate non-pollutants such as flow. The decision went on to find that, even with the deference that would be accorded to EPA in a *Chevron* Step 2 analysis, EPA's interpretation of the Clean Water Act to

allow the regulation of flow would be an impermissible construction of the statute [*Virginia Department of Transportation et al v. United States Environmental Protection Agency et al., case number 1:12-cv-00775*].

**Response 2**

This comment raises several objections to the proposed effluent flow limits in the Draft Permit. First, the comment notes that maximum design flow and instream drought levels would not occur simultaneously. Second, the comment considers that even if it did occur for a relatively short time, the facility could still meet the monthly average flow limitation. Third, the comment notes that other permits in Washington, D.C. or Idaho do not include effluent flow limits. Fourth, the comment considers an effluent flow limit is not necessary to prevent inflow and infiltration (I/I) or other capacity issues because the permit has other provisions to prevent these. Finally, the comment references a TMDL in Virginia that was not able to regulate flow as a non-pollutant. These five aspects of the comment are responded to in order below.

The inclusion of a wastewater effluent flow limit in the permit is authorized by the CWA § 402(a)(2), which provides that "[t]he Administrator shall prescribe conditions for such permits to assure compliance with the requirements of" CWA § 402(a)(1) – including, by reference, CWA § 301 – "and such other requirements as [she] deems appropriate." As discussed below, the Pease wastewater effluent flow limit is an appropriate "operation and maintenance" requirement that assures compliance with the technology and water quality-based effluent limitations required by CWA § 301 and is "appropriate" pursuant to CWA § 402(a)(2).

40 C.F.R. §§ 122.41(d) and (e) require the permittee to (1) "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," and (2) "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 the permit." The design capacity-based wastewater effluent flow limit is authorized by section 402(a)(2) and appropriate in order to assure that the City operates its facility to comply with its permit's technology- and water quality-based effluent limitations. Using a facility's design flow in the derivation of pollutant effluent limitations, including conditions to limit wastewater effluent flow, is fully consistent with, and anticipated by NPDES permit regulations. 40 C.F.R. § 122.45(b)(1) provides, "permit effluent limitations…shall be calculated based on design flow." POTW permit applications are required to include the design flow of the treatment facility. Id. § 122.21(j)(1)(vi).

Additionally, the wastewater effluent flow limit is a condition designed to ensure that WQS will be met. 40 C.F.R. § 122.4(d) prohibits issuance of an NPDES permit "[w]hen the imposition of conditions cannot *ensure* [emphasis added] compliance with the applicable water quality requirements of all affected States." Section 122.44(d)(1) is similarly broad in scope and obligates the Region to include in NPDES permits "any requirements…necessary to: (1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality." "Congress

has vested in the Administrator [of EPA] broad discretion to establish conditions for NPDES permits" in order to achieve the statutory mandates of Section 301 and 402. Arkansas v. Oklahoma, 503 U.S. 91, 105 (1992). Under CWA section 402, EPA may issue NPDES permits "for the discharge of any pollutant, or combination of pollutants" if the permit conditions assure that the discharge complies with certain requirements, including those of section 301 of the CWA.

To that end, EPA based both its reasonable potential calculations and its permit effluent limitations for individual pollutants on a presumed maximum wastewater effluent discharge from the facility. EPA's reasonable potential regulations require EPA to consider "where appropriate, the dilution of the effluent in the receiving water," 40 C.F.R. § 122.44(d)(1)(ii), which is a function of both the wastewater effluent flow and receiving water flow. EPA guidance directs that this reasonable potential analysis be based on critical conditions. EPA, accordingly, is authorized to carry out its reasonable potential analysis by presuming that a plant is operating at its design flow during critical instream conditions (i.e., 7Q10) when assessing reasonable potential.[2]

EPA notes that a NPDES permit allows a facility to discharge wastewater in accordance with the limitations set forth in the permit. In this case, the Pease WWTF may discharge effluent flow up to the flow limit as an annual average flow. EPA acknowledges that the effluent flow at this facility is likely to vary throughout the year and is likely to be higher under wet weather conditions due to the I/I present in the collection system. However, the permit allows the facility to discharge up to the flow limit under all instream conditions. Therefore, EPA has chosen this as the "worst case" condition to evaluate the need to establish effluent limitations because this is what the permit allows. Establishing water quality-based effluent limitations that are sufficiently protective to meet in-stream water quality criteria requires EPA to account for both wastewater effluent and receiving water flows, as EPA explained in the Fact Sheet. Conditions imposed by EPA to limit wastewater effluent flows from the facility for the permit term are designed to assure that the facility's pollutant discharges do not result in excursions above in-stream water quality criteria, in accordance with section 301(b)(1)(C) of the Act and implementing regulations. 40 C.F.R. §§ 122.4(d), 122.44(d)(1), 122.44(d)(1)(vii)(A), 122.44(d)(5).

Although the effluent flow limit is based on the two rationales above, EPA notes that contrary to the assertions made in the comment, the CWA defines "pollutant" to mean, inter alia, "municipal . . . waste" and "sewage…discharged into water." CWA § 502(6).

EPA agrees that brief excursions of the flow limit would not necessarily result in permit violations. The comment refers to the limit as a monthly average limit but EPA notes that it is actually a rolling annual average limit. This makes this point even more clear. EPA acknowledges that effluent flow volumes can vary in the short-term but EPA must make a reasonable estimate of worst-case effluent flow volume in order to evaluate appropriate limits as discussed above. Again, EPA considers that the design flow of the facility is the appropriate effluent flow value for this analysis. Even the comment suggests that such

[2] USEPA, 2010, National Pollutant Discharge Elimination System (NPDES) Permit Writers' Manual, EPA-833-K-10-001, p. 6-17

flow variations above the design flow during periods of critical instream flow are not possible, which gives EPA the reassurance that its evaluation of permit limits will ensure protection of WQS.

To the extent the comment is suggesting that the effluent flow limit itself is not necessary because this effluent flow would not occur during periods of instream drought conditions, EPA disagrees. If there were no annual average flow limit then the facility could presumably increase its annual average flow significantly to the point that even the low variation of the flow is above the original design flow used in the development of the permit limits. Therefore, EPA asserts that it is the flow limit itself that prevents the flow from exceeding the design flow under worst case ambient conditions and is necessary as a backstop to protect WQS throughout the permit term.

Third, the commenter's reference to other areas of the country that do not have effluent flow limits is not relevant. Even many POTW permits within NH (such as the one for Pease) did not historically have effluent flow limits, but that does not mean that EPA is precluded from ever establishing them based on an updated permitting approach. Moreover, EPA Region 1 has included limits on the wastewater effluent flow from POTWs, based on the design capacity of the facility, throughout Massachusetts (114 facilities since 1984) and increasingly in New Hampshire (25 facilities since 2005). Moreover, States and other EPA Regions have issued over 3,750 NPDES permits to POTWs with similar limits in other parts of the country. Additionally, there may be different ways to establish protective permit limits based on the applicable regulations and water quality standards in effect at the time a permit is developed, and EPA has determined, in this case, that an effluent flow limit for Pease is necessary to continue to be protective of water quality standards for the reasons described in the Fact Sheet and in this Response.

The commenter's citation to Virginia Department of Transportation is not relevant to this proceeding. That case concerned EPA's approval of TMDLs under Section 303 of the Act, not the development of reasonable effluent limitations under separate and distinct authority governing the NPDES permitting process—Sections 301, 402 and implementing regulations.

Fourth, regarding I/I and other capacity issues EPA acknowledges that the permit includes the three provisions referenced in the comment related to these issues.

Part I.C.3 of the permit says "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." This provision works in conjunction with the effluent flow limit given that this provision, by itself, cannot ensure that the effluent flow does not exceed 100% design flow capacity during the permit term. Rather, this provision is designed to ensure I/I does not cause a violation of the permit limits, including the annual average effluent flow limit, to protect water quality standards.

In Part I.J.5.c of the permit, NHDES requires an application for a sewer connection permit for any new connection to a WWTP operating above 80% design flow capacity. This provision also works in conjunction with the effluent flow limit given that this provision, by itself, cannot ensure that the effluent flow does not exceed 100% design flow capacity during the permit term. For example, existing connections may increase during the permit term which would not be subject to such an application and may result in flows exceeding the design flow capacity.

In Part I.J.7 of the permit, NHDES requires the Permittee to plan for facility improvements as flows exceed 80% of the design flow capacity. The provisions states "the Permittee shall submit to the permitting authorities a projection of flows and loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the Permittee may be required to submit plans for facility improvements." This provision also works in conjunction with the effluent flow limit given that this provision, by itself, cannot ensure that the effluent flow does not exceed 100% design flow capacity during the permit term. Rather, this provision ensures that the facility "plans" for expected flow increases in a manner that will comply with their permit limits. Without the effluent flow limit, a Permittee could merely submit these facility improvement plans in accordance with this provision and then proceed to discharge above the design flow capacity of the facility. Such discharges would potentially cause or contribute to violations of water quality standards given that they exceed the assumptions applied in developing the permit limits. Additionally, such an increase in pollutant loading would potentially violate antidegradation provisions without the necessary antidegradation review. To avoid this, EPA must include an effluent flow limit in the permit and if an increase in flow above the design flow capacity is necessary, EPA and NHDES may increase the effluent flow limit through a permit modification or permit reissuance based on the facility improvement plans and other necessary information to ensure protection of all WQS, including antidegradation provisions, at the higher effluent flow.

EPA notes that it recently addressed nearly identical arguments challenging an effluent flow limit in an appeal of the City of Lowell's wastewater treatment facility. In that case, the Environmental Appeals Board upheld the Region's inclusion of an effluent flow limit and rejected many of the same arguments that the City asserts in its comment. *See In re: City of Lowell*, 18 E.A.D. 115, 154-160 (E.A.B. 2020).

Finally, EPA notes that it has granted the Permittee's request to increase the flow limit to 1.77 MGD upon completion of the facility expansion. Therefore, the flow limit does not constrain the Permittee beyond the facility's designed capacity.

Therefore, EPA confirms that the effluent flow limit is necessary, and this comment does not result in any change to the Final Permit.

**Comment 3**

**Daily Maximum Limits for BOD and TSS.** The daily maximum limits for BOD and TSS are legally inconsistent with EPA's regulations, which (1) specify monthly/weekly technology-based BOD/TSS limits (secondary treatment) and (2) require monthly and weekly average limits, unless impracticable [*40 CFR § 122.45(d)(2)*]. The development of average monthly and weekly permit limits for BOD and TSS is clearly not impracticable, because EPA has, in fact, imposed them in the permit as well. We also note that the vast majority of POTW permits in the country have monthly/weekly only limits for BOD and TSS – including facilities such as the District of Columbia's Blue Plains treatment plant (permit issued by EPA Headquarters/Region III, incorporated herein by reference).

The City is aware that EPA has removed such daily maximum BOD and TSS limits from other POTW permits in the region, including in Massachusetts. See, for example, the City of Lowell, Massachusetts NPDES permit which can be viewed here: https://www3.epa.gov/region1/npdes/permits/2019/finalma0100633permit.pdf. There is nothing in EPA's regulation which authorizes best professional judgement based daily maximum effluent limits for the Pease facility.

The City also notes that even if daily maximum limits were authorized, the expression of the daily maximum TSS limit appears to be incorrect. The City assumes EPA is working from the construct of taking the monthly average (30 mg/L) and multiplying it by 1.5 to get the weekly average (45 mg/L) found in the secondary treatment regulation and then multiplying the monthly average value times "2" to get the daily maximum value of "60". However, the permit includes a highly unusual value of "50" for TSS. EPA does not explain how it calculated the "50" value and the legal basis for its imposition.

Significantly, the City has violated the BOD and TSS daily maximum limit during the period of data used to develop the draft permit. (Fact Sheet at 5.1.2.1 and 5.1.31).

**Response 3**

The 2000 Fact Sheet noted that the $BOD_5$ and TSS limits were based on secondary treatment requirements, which is accurate for the monthly average and weekly average limits of 30 mg/L and 45 mg/L, respectively. As pointed out in the above comment, the secondary treatment requirements do not specify a daily maximum limit. Since the daily maximum limits for $BOD_5$ and TSS of 50 mg/L were in the 2000 Permit, EPA is required to retain these provisions in the Final Permit in accordance with anti-backsliding regulations. The commenter has provided no basis for removing these limits pursuant to an exception to anti-backsliding requirements and EPA does not find that any anti-backsliding exceptions apply in this case. Further, as noted in the Fact Sheet, the Permittee only violated these maximum daily $BOD_5$ and TSS limits once each during the 5-year review period.

The comment also notes that the 2019 NPDES permit for the City of Lowell does not include these maximum daily limits. In the case of the 2019 Lowell Permit, EPA considered the environmental benefit in relation to reducing CSO discharges. The relevant comment and EPA response are copied below for reference.

*2019 Lowell Wastewater Utility Comment:*

*As with the flow limits addressed above, the daily maximum CBOD/TSS limits are also counterproductive environmentally because they are a de facto limit on how much peak wet weather flow we can take through the Duck Island treatment facility. Specifically, we have exceeded the TSS daily maximum limits on a number of occasions. It makes no sense to restrict flows into the treatment facility (which flows would then receive treatment - including disinfection) as opposed to discharging those same volumes as untreated combined sewage from our CSO outfalls.*

*2019 EPA Response:*

*EPA agrees that the maximum daily limits are not listed as technology-based limits for secondary treatment in 40 C.F.R. § 133.102 and, in this case, may create a disincentive to minimize CSO discharges. Therefore, EPA has removed the maximum daily limits from the Final Permit and replaced them with reporting only requirements. EPA is requiring monitoring as this data along with monthly and weekly average data will be useful to assess overall operation of the facility.*

Given that this environmental benefit does not apply to the Pease permit, which does not include any CSO outfalls, EPA is not applying this same change to the Pease permit. Therefore, this comment does not result in any change to the Final Permit.

**Comment 4**

**Mass load limits for BOD and TSS should be based upon 1.77 MGD.** The City disagrees with EPA's assertion that antibacksliding requirements mandate that the City's mass limits for BOD and TSS be based upon 1.2 MGD. See Fact Sheet at 18 ("The Draft Permit continues these limits in accordance with anti-backsliding provisions at 40 CFR § 122.44(l)."). Neither the EPA nor the NHDES provide sufficient justification for maintaining the mass-based limits at the 1.2 MGD level. NHDES simply states that "These loading limits will remain the same for the increased design flow." The City is unaware of the rationale which would require the permit to maintain the 1.2 MGD-based mass loads for BOD and TSS. To the extent the rational is antibacksliding, it suggests that any small plant that meets its mass loading limit would have to live within those loads forever. That appears to be inconsistent with prior permits in the region.

The antibacksliding reference ignores exceptions to the antibacksliding rule that will allow the mass limit to be based upon the 1.77 MGD flow. Among other exceptions is the fact that there will be an expansion of the permitted facility. This exception applies here.[3]

[3] Clean Water Act Section 402(O)(2) EXCEPTIONS. A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if -
(A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

EPA notes that the mass limits for BOD were met during the last permit term – which has no relevance on the legal need to or the ability of the expanded plant (50% larger) to meet that lower load limit. EPA must explain its reasoning for limiting the mass limits to the 1.2 MGD flow and to the extent that conclusion is based upon antibacksliding, EPA's rationale for why none of the statutory exceptions apply.

Significant to EPA's consideration of our request to base our mass loading limits on 1.77 MGD instead of 1.2 MGD, we note that the City recently completed the upgrade of the Peirce Island WWTF converting it from a chemically enhanced primary treatment facility to a tertiary level treatment facility with nitrogen removal. With the facility online since December 2020 the average reduction in load has been 87% for TSS (approximately 1,600 lbs/d) and 90% for BOD (approximately 2,000 lbs/d). This massive reduction in load from this 6.13 MGD (previous design 4.8 MGD) facility dramatically outweighs the insignificant increase in load proposed for the Pease WWTF. Not only does the Pierce Island reduction offset the small increase at Pease but it actually creates additional assimilative capacity in the river as well. EPA should take this additional assimilative capacity and water quality improvements by the Peirce plant into account for all relevant purposes in the renewed Pease permit.

**Response 4**

The Commenter correctly cites to the NHDES letter dated March 4, 2020, as the primary basis for maintaining the TSS and BOD limits as contained in the 2000 Permit. However, the framework for that NHDES letter was antidegradation review, not anti-backsliding. In considering pollutant 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.

The Clean Water Act specifically protects "existing" and "designated" uses of navigable waters. PUD No. 1 of Jefferson Cty. v. Washington Dep't of Ecology, 511 U.S. 700, 704–05 (1994) (citing CWA § 303(c)(2)(A) & (d)(4)(B); 40 C.F.R. § 131.12). Thus, a state's water quality standards must identify existing and designated uses, such as drinking, recreation, wildlife support, and shellfish cultivation, and must establish "'water quality criteria for such waters based upon such uses.'" Id. at 704 (quoting CWA § 303(c)(2)(A)).

The federal antidegradation policy establishes three tiers to protect water quality. The first tier consists of a minimum floor that protects all waters of the United States. This tier requires maintaining and protecting all existing uses of a water body as well as the level of water quality necessary to preserve those uses. See 40 C.F.R. § 131.12(a)(1). This means that the water quality in the water body may be lowered but only to the point where all existing uses are maintained and protected, and that it is not permissible to

(B) (i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section;

lower water quality such that existing uses are impaired. This first tier focuses on existing rather than designated uses. A state's water quality standards must "be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation." Id. at 705 (citing CWA § 303(d)(4)(B)). The mandate's broad reach is reflected in 40 C.F.R. § 131.12(a)(2), which provides that states "shall assure water quality adequate to protect existing uses fully." Thus, no activity that would "'partially or completely eliminate any existing use'" is permitted, even if it would leave the majority of a given body of water undisturbed. PUD No. 1, 511 U.S. at 718–19 (quoting EPA, Questions and Answers on Antidegradation at 3 (Aug.1985)). Cf. Water Quality Standards Regulation, 47 Fed. Reg. 49234 (Oct. 29, 1982); Water Quality Standards Regulation, 48 Fed. Reg. 51400 (Nov. 8, 1983). See generally, U.S. Environmental Protection Agency. 2017. Water Quality Standards Handbook: Chapter 4. EPA-823-B-17-001. EPA Office of Water, Office of Science and Technology, Washington, D.C. See also, Arkansas v. Oklahoma, 503 U.S. 91 (1992). The second and third tiers focus on protecting and maintaining "high quality" and "outstanding" water bodies, respectively. See id. § 131.12(a)(2)-(3).

Each state is required to adopt an antidegradation policy consistent with EPA's antidegradation regulations at § 131.12. A state's antidegradation policy specifies the framework to be used in making decisions about proposed activities that will result in changes in water quality. Along with developing an antidegradation policy, each state must identify the method it will use to implement the policy.

Per the requirements of New Hampshire's antidegradation policy at Env-Wq 1708, NHDES performed an antidegradation review of the City's requested design flow increase. NHDES concluded that the loading limits for $BOD_5$ and TSS must remain the same as the facility flow rate is increased. This letter acknowledges that as the effluent flow of the facility increases, the effluent concentration levels of $BOD_5$ and TSS will need to decrease in order to meet the mass-based limits.

Therefore, EPA clarifies that these limits are being carried forward based on antidegradation, not based solely on anti-backsliding as implied in the Fact Sheet. EPA is obligated to abide by the State's findings and maintain the loading limits for $BOD_5$ and TSS in the Final Permit that are based on the effluent flow of 1.2 MGD. *See Ky. Waterways Alliance v. Johnson,* 540 F.3d 466, 471 (6th Cir. 2008) ("[T]he CWA permits the revision of certain effluent limitations ,… only if such revision is subject to and consistent with the antidegradation policy established under [the CWA].") (emphasis added). Given the application of the State's antidegradation review does not allow an increase in these load limits, application of the anti-backsliding exceptions is unnecessary. For this reason, EPA did not discuss in the Fact Sheet whether an anti-backsliding exception at CWA 402(o)(2) may apply, and EPA maintains, based on this response, that such an evaluation is unnecessary and moot.

Once a NPDES permit has been issued for a particular facility (*e.g.*, Pease's 2000 individual permit), the Clean Water Act (CWA) seeks to preserve improvements made to water quality by expressly prohibiting "backsliding" under CWA section 402(o). 33

U.S.C. § 1342(o). Backsliding "occurs when a renewed, reissued, or modified permit contains effluent limitations [that are] less stringent than those in the previous permit." *In re City of Tulsa*, 3 E.A.D. 505, 506 (CJO 1991) (citing CWA § 402(o), 33 U.S.C. § 1342(o)). The CWA's anti-backsliding provision in section 402(o) consists of three main parts: (1) a prohibition on specific forms of backsliding; (2) exceptions to the prohibition; and (3) a safety clause that provides an absolute limitation (also referred to as a "backstop") on backsliding if the revised effluent limit would result in a violation of water quality standards. 2010 Permit Writers' Manual § 7.2.1, at 7-2.

The third part of CWA section 402(o) – the safety clause – provides that "[i]n no event may…a permit…be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 1313…." CWA § 402(o)(3), 33 U.S.C. § 1342(o)(3) (emphasis added). Therefore, even if one of the exceptions to the backsliding prohibition, such as that referenced by commenter regarding an expansion to a permitted facility, is applicable and its conditions met, section 402(o)(3) acts as a floor on the extent to which effluent limits may be relaxed. Thus, under both CWA sections 303(d)(4), regarding antidegradation, and 402(o)(3), regarding anti-backsliding, a principal question when evaluating the permissibility of less stringent permit limits is whether the water quality standards will be met. As described further in Response 45 below, EPA does not consider that any increase in load will ensure water quality standards will be met. Therefore, these limits cannot be made less stringent.

Additionally, the comment suggests that recent load reductions at the Peirce Island WWTF should allow a smaller amount of $BOD_5$ and TSS load increases at the Pease WWTF. EPA disagrees with this suggestion and asserts that antidegradation regulations apply to both facilities independently because they are separate facilities that are both requesting flow increases. This is confirmed by NHDES which conducted independent antidegradation reviews and submitted independent antidegradation letters to EPA.

**Comment 5**

**Entercocci compliance schedule.** The City requests a three-year compliance schedule for the newly proposed enterococci limits. The City is particularly concerned about the daily maximum limit because there is no existing enterococci data for the Pease facility. As EPA knows, the City has struggled to optimize disinfection to meet the extraordinarily stringent fecal coliform limitations and still occasionally exceeds the daily maximum fecal coliform limits. The City is concerned about its ability to simultaneously meet two very stringent daily maximum requirements (one for fecal and one for entero) while still meeting the chlorine residual requirement. A three-year compliance schedule is appropriate given the historical challenges with interference in our disinfection for fecal and because during that three-year period, the facility will continue to be required to meet the most stringent bacteria limit in any permit in the country to our knowledge (14 monthly geometric mean and no more than 10 percent of monthly samples to exceed 28 counts/100 mLs). The daily maximum limit of 104 counts/100 mLs for entero may be more difficult than the fecal coliform limit (which allows greater flexibility – some samples can exceed the 28 count/100 mLs requirement) for the facility to meet. The City won't know until it performs some comparative sampling and then implements any optimization

steps to ensure compliance with both bacterial indicators while also staying below the chlorine residual requirement.

**Response 5**

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." As noted in the comment, the City has been working to optimize its disinfection procedure to meet the current fecal coliform limit of 14 counts/100 mL which has been in their permit for over 20 years. During the 5-year review period for this Draft Permit, the Permittee had 11 violations of the 14/100 mL limit. This extended period of non-compliance is even more concerning given the shellfishing use of the receiving water and the potential for impacts to human health.

EPA acknowledges the lack of *Enterococci* effluent data but notes that the optimization efforts referenced in the comment are likely to significantly reduce both the *Fecal Coliform* and the *Enterococci* levels in the effluent. Based on the lack of data that would demonstrate compliance with the new *Enterococci* limit, EPA considers that a compliance schedule is appropriate. However, given the ongoing optimization efforts EPA considers that there is a potential for compliance within 12 months of the effective date of the permit, after a single year of measuring *Enterococci* in the effluent and further optimizing the disinfection process as necessary. Therefore, EPA considers a 12-month compliance schedule to be "as soon as possible" and has included it in the Final Permit so that the *Enterococci* limits will go into effect 12 months after the effective date of the permit. During that initial 12-month period, *Enterococci* will be required to be monitored only with no effluent limit. The *Fecal Coliform* limit will remain in effect and will not be subject to a compliance schedule. The conditions of the *Enterococci* compliance schedule have been added to Part I.H.3 of the Final Permit.

If the Permittee is unable to comply with the *Enterococci* limits once it becomes effective, they may contact EPA's Enforcement and Compliance Assurance Division (ECAD) to discuss a potential administrative order with additional time to achieve the *Enterococci* limits.

**Comment 6**

**Bacteria Frequency of Monitoring**. The City requests that the frequency of monitoring for both enterococci and fecal coliform be reduced to 3 times per week instead of daily during the winter season (October 1 through April 30).

**Response 6**

This year-round, daily sampling frequency is consistent with the *EPA/DES Effluent Monitoring Guidance*, revised July 19, 1999 and remains unchanged in the Final Permit.

**Comment 7**

**Bacteria Units**. The permit calls for enterococci and fecal coliform to be reported in units of coliform forming units per 100 ml or cfu/100ml. These tests are completed using filtered samples. Other allowed testing methods report results in most probably number per 100 ml or MPN/100 mL. The City would like to utilize any allowed sampling method and report in the appropriate unit (cfu/100mL or MPN/100mL). Reporting cfu currently results in a "soft violation" in the DMR system. Note that these units are referenced throughout the permit and should be addressed accordingly.

**Response 7**

EPA notes that Part I.A, Table 1 of the Draft Permit does not include any units for *enterococci* or fecal coliform indicating that the Permittee may use any sampling method approved in 40 CFR Part 136 for these parameters.

Having said that, footnote 9 of Table 1 does reference MPN, which is consistent with the units specified in the 2000 Permit as well as the units specified in the 2022 NH statute amendment, referenced in section 5.1.6 of the Fact Sheet. In order for EPA to enter the permit requirements into NetDMR for electronic reporting, the units for each parameter have to be specified in NetDMR. Therefore, while the permit does not include units, EPA has chosen to specify units in NetDMR as MPN rather than cfu. Therefore, if the Permittee measures for these parameters and the resulting units are cfu (rather than MPN which is coded into NetDMR) they may indicate this in the electronic DMR submission. EPA confirms that this change of units in the submission will not result in a permit violation.

**Comment 8**

**TRC**. The City questions the legality of EPA's policy of limiting effluent limits for TRC to 1.0 mg/L. The daily max limit should be 1.3 mg/L based on Env-Wq Table 1703-1: water quality for toxic substances water quality based standard. This is warranted given the fact that the draft permit contains stringent effluent limitations for bacteria and the new 104 daily max limit for enterococcus. Further, the City has had an exceedance of TRC during the data review period so it is essential that the City is given the full water quality-based TRC limit.

**Response 8**

The daily maximum TRC limit in the Final Permit will remain at 1.0 mg/L due to anti-backsliding requirements, as this was the limit in the 2000 Permit and there are no exceptions to anti-backsliding that are applicable. To reduce the potential for the formation of chlorination byproducts during the wastewater disinfection process, EPA Region 1 has historically established a maximum daily total chlorine residual concentration of 1.0 mg/L whenever the average monthly and/or the maximum daily limit(s) allowed under NH Standards at Env-Wq 1703.21 and Table 1703-1, after factoring in available dilution, would be less stringent than 1.0 mg/L. This approach is consistent with the provisions at Section 101(a)(3) of the Act, and New Hampshire standards at Env-Ws 1703.21(a) which prohibit the discharge of toxic pollutants in toxic amounts.

EPA notes that if the Permittee is unable to achieve this TRC limit as well as the bacteria limits set forth in the permit using the existing treatment process, the facility must upgrade its process to ensure compliance with these water quality-based limits as soon as possible. See also Response 5.

The commenter requests the full water quality-based TRC limit because it had an exceedance of TRC during the data review period. However, the Permittee mentioned during the March 11, 2020 site visit that it was planning to replace the chlorination system at the facility with a UV disinfection system. Therefore, this limit would only be a concern any time chlorine is added at any point in the treatment process (*i.e.*, for conducting maintenance or when chlorine is used as a backup disinfection method) as noted in the Fact Sheet. In any case, the limit has not been revised for the reasons described above.

**Comment 9**

**Cyanide**. The City objects to the proposed quarterly sampling requirement for cyanide. There is no reasonable potential to exceed the cyanide water quality standard. Three of the four samples were non-detected and the fourth sample was detected but was below the reporting level. That sample was at approximately one-half of the reporting level. Even taking that single sample at face value (rather than being attributable to interference), there is no basis for quarterly cyanide sampling.

NHDES expressed an interest in further cyanide data to determine whether there might be reasonable potential in future permits. The City disagrees. Even if this data point were valid, the concentration is only at 12 percent of the water quality standard. The remainder of the three data points were non-detect. It is clear that the available data reveal nothing close to reasonable potential and no basis for quarterly monitoring. Under NHDES' rationale, the City would sample for every pollutant on a quarterly basis.

Finally, collecting 20 samples over the next five years to establish an antidegradation baseline is excessive. A more targeted (but still unnecessary in the City's view) way to address that interest would be to require quarterly sampling for cyanide during the 4$^{th}$ or 5$^{th}$ year of the permit. We ask that EPA remove the cyanide sampling. Alternatively, EPA should modify the frequency of the sampling requirement to annually.

**Response 9**

Due to the City's request for a flow increase at the Pease WWTF, an antidegradation review was conducted and NHDES issued a letter on March 4, 2020, describing the results of this antidegradation study. Subsequently, NHDES issued another letter on March 15, 2022, updating the findings for several pollutants, including cyanide. As indicated in those letters and in the Fact Sheet, cyanide was below the minimum detection limit (*i.e.*, non-detect) in all four ambient samples and in three of the four effluent samples. The one sample above the minimum detection limit was 12 µg/L, which is above the minimum detection limit of 7 µg/L but below the minimum reporting limit of 20 µg/L. Based on these data, NHDES determined that the discharge of cyanide was

"insignificant and no numeric limit is needed" based on the antidegradation review. However, due to the lack of a robust data set, NHDES recommended a quarterly monitoring requirement for cyanide be included in the Draft Permit in order to better characterize the effluent for a future permit reissuance. Based on this recommendation, EPA included a quarterly monitoring requirement for cyanide in the Draft Permit.

Based on this comment, EPA reevaluated whether a quarterly monitoring requirement is necessary to adequately characterize the discharge for a future permit reissuance. Given that the ambient samples were all non-detect and the dilution factor at this facility is 100 (even after the increase in design flow to 1.77 MGD), the single result of 0.12 µg/L would represent only 12% of the water quality criterion of 1.0 µg/L for the protection of aquatic life under critical conditions (as noted in the comment). Given this comparison, EPA finds that it is very unlikely that the discharge of cyanide will drastically increase to the point where a permit limit is necessary in the future. Further, EPA notes that the facility will be required to sample for cyanide as part of its permit reapplication at the end of this permit term and EPA can use that data to reassess this determination. Therefore, EPA has determined that the quarterly monitoring requirement is not necessary, and it has been removed from the Final Permit.

**Comment 10**

The City is cognizant of the increased need for attention on the PFAS family of chemicals in the environment and their impacts on health and water quality. The City has taken that need into consideration as it has evaluated the package of new testing proposed in the draft permit. That stated, there is value in optimizing the sampling given the level of effort and costs to conduct such work as described below.

**Proposed Adjustment to the quarterly effluent PFAS sampling**. The City requests that the quarterly PFAS sampling be revised to require the collection of eight quarters of data only (quarterly for two years). That is enough to characterize effluent levels for the PFAS of interest. Alternatively, the City requests permit language that will allow the City to request a reduction in monitoring (say to annually) which EPA can approve as a minor modification after the collection of eight quarterly results.

**Response 10**

EPA recognizes that this new PFAS monitoring requirement entails increased cost. However, EPA maintains that the monitoring frequency should be at least quarterly to ensure that there are adequate data to assess the presence and concentration of PFAS in discharges. These data will enable EPA to obtain comprehensive and representative information on the sources and quantities of PFAS discharges and EPA will use these data in the future to inform its actions. *See* CWA § 308(a).

The comment suggested that EPA incorporate an off ramp to reduce or remove PFAS sampling if initial results are below a certain level. Given that limited PFAS data for WWTFs are available and that this is a new monitoring requirement, EPA does not consider it appropriate to provide any off ramps within this initial permit term. This is

especially true in this case, given the historic PFAS contamination in the vicinity of the Pease collection system. However, EPA will evaluate all available data in the next permit reissuance and may reduce PFAS monitoring in the future based on the results of this sampling and other updated information in comparison to any PFAS water quality criteria that may be in effect at that time.

Finally, this monitoring is consistent with EPA's *October 2021 PFAS Strategic Roadmap*[4].

**Comment 11**

**Quarterly WET testing is unnecessary as is the Associated Effluent and Instream Pollutant Sampling.** Given the fact that the City gets 100 dilutions (it should be 149), has only two significant industrial users and has had no prior WET failures it is not justified to require quarterly toxicity testing. The City requests that this requirement be changed to annual testing.

The City also questions why it has to sample for Cadmium, Copper, Zinc, and the other parameters during our WET testing. First, the City achieves 100 dilutions so WET failures are extremely unlikely. Second, the City has not had any WET failures. Finally, in the unlikely event of a WET failure, the City can then perform a standard Toxicity Identification Evaluation (TIE) to pinpoint the pollutant responsible, rather than sampling for these unlikely pollutants. Accordingly, the City asks that the sampling during WET testing for these pollutants be removed from the permit.
If EPA insists on keeping the WET testing at a quarterly frequency, the City asks that it be limited to the first two years following the effective date of the 1.77 MGD design flow once the WWTF is upgraded and then revert to once per year assuming all eight of the quarterly tests were passed. Those eight tests along with the City's extensive passing record, along with 100 dilutions (really should be 149) make quarterly WET testing a waste of time and money.

**Response 11**

As noted on page 13 of the Fact Sheet, Lonza Biologics, Inc (Lonza) contributes an average of 379,700 gallons per day to Pease, which is over half of the total median flow of 0.69 MGD over the 5-year review period. The flow increase will allow Lonza to increase capacity in the coming years and will presumably become an even greater percentage of the total flow at the facility. Concurrently, the Pease facility itself will need to be upgraded to accommodate the increased flow from Lonza. EPA considers this expanded industrial component as well as the treatment upgrade of the facility as having the potential to result in toxic impacts in the discharge.

On the other hand, EPA acknowledges the significant dilution available at the point of discharge and, as noted on page 25 of the Fact Sheet, EPA Region 1's guidance recommends that permits for discharges having a dilution factor greater than 100:1 require acute toxicity testing two times per year for two species, as was required in the 2000 Pease permit. Therefore, based on this comment EPA agrees that carrying forward the twice per year frequency is appropriate under the condition as suggested in the comment that any WET failures would require Pease to conduct a Toxicity Reduction

[4] https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf

Evaluation/Toxicity Identification Evaluation ("TRE/TIE"). Therefore, the Final Permit has been reduced to twice per year and includes the following provision under Part I.H.4 Special Conditions:

> The Permittee shall initiate a retest of any WET test when there is an excursion of an acute permit limit within one week of receiving the WET test results. The Permittee shall notify EPA and NHDES that a WET retest is being initiated by calling the numbers in Part I.I.8 below. If the retest fails, the Permittee shall identify and take steps to mitigate the source of toxicity within 30 days. A second retest shall be conducted within 30 days after receiving the results that the first retest failed. If the second retest fails or if the Permittee does not identify the source of the toxicity of the previous two WET tests, the Permittee shall conduct a Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) in accordance with the *EPA Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (August 1999)[5] and prepare a TRE/TIE Report summarizing the findings of the evaluation of the findings. Within 30 days following completion of the Report, the Permittee shall submit its TRE/TIE Report(s) to EPA and NHDES in accordance with Part I.I.5.b and Part I.I.7, respectively.

Finally, the comment objects to the chemical-specific monitoring required as part of the WET tests. This monitoring is required in the WET testing protocol and is useful in at least two ways. First, these data may be used to determine the source of any toxic impacts. Second, this data may be used by EPA to characterize the discharge as well as the receiving water with respect to the various pollutants (such as cadmium, copper, zinc, ammonia, etc.) in determining whether the discharge has the reasonable potential to cause or contribute to an excursion of water quality standards. While these monitoring requirements have been included in the WET testing protocols for many years, EPA has recently required these results to be reported in each relevant DMR. This reporting does not represent separate monitoring requirements but merely requires the Permittee to report the results from the WET test into the DMR to facilitate access to the data by EPA and by the public through EPA's Enforcement and Compliance History Online (ECHO) tool[6].

**Comment 12**

**Quarterly Ambient Sampling is Unnecessary.** The City also questions why it must collect an instream sample and analyze it for the same pollutants associated with the WET test above. None of this information matters if the City passes the test (which with 100 dilutions is a near certainty). In the unlikely event of a WET test failure, it is even more unlikely that one of these pollutants would be the cause. Accordingly, we ask that the ambient sampling requirement be removed and, instead, the City be required to perform a standard TIE upon any WET failure (after confirmation of that failure). If the EPA insists on keeping this requirement, the schedule should be modified as noted above for the WET test after the upgrade to 1.77 MGD.

[5] EPA's Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999. EPA Document Number: EPA/833B-99/002. https://www.epa.gov/sites/production/files/2016-02/documents/tre.pdf
[6] Accessible at: https://echo.epa.gov/

**Response 12**

See Response 11. This ambient sampling is required by the WET testing protocol and will remain in the Final Permit.

**Comment 13**

**Clarify Our WET Testing Location.** In the prior NPDES permit, footnote 5 to Part 1.A.1 stated "The whole effluent toxicity (WET) sample shall be taken prior to mixing with the effluent from any other source (the Town of Newington)". This note is not included in the draft permit and should be added. The outfall diffuser is shared with the Town of Newington WWTF and without this caveat, if there is a failure of a WET test, it cannot be determined if the issue was due to the Pease or Newington discharge.

**Response 13**

EPA agrees with this comment and the Final Permit has been modified to include language in footnote 1 to Part I.A.1. that specifies that all effluent sampling must be conducted prior to mixing with any other waste stream, including the effluent from the Town of Newington WWTF.

**Comment 14**

**Influent/biosolids PFAS Sampling**.

The City requests ask that the quarterly PFAS sampling be revised to require the collection of eight quarters of data only (quarterly for two years). That is enough to characterize the effluent levels for the PFAS of interest. Alternatively, the City requests permit language that will allow it to request a reduction in monitoring (say to annually) which EPA can approve as a minor modification after the collection of eight quarterly results. Importantly, as to biosolids, the City fails to see why any testing is required given that the City landfills its biosolids. The permit should specify that the City will collect four PFAS biosolids samples and provide them to EPA/NHDES at least 30 days before changing to land application of biosolids. The footnote referenced in the table for the influent PFAS compounds appears to be incorrect. It appears that the footnote should reference Note 11, not Note 13. Please adjust accordingly.

**Response 14**

See Response 10.

Regarding sludge, in EPA's judgment, PFAS monitoring of influent, effluent and sludge is necessary to better understand the fate and transport of PFAS throughout the treatment process. Additionally, these data may be used to inform future decisions regarding appropriate sludge disposal practices.

The reference to footnote 13 for the influent PFAS monitoring was incorrect, as noted in the comment, and has been updated to reference footnote 11.

**Comment 15**

**Footnote 1 – Sampling Days and Times.** The City objects to the requirement in Footnote 1 that effluent samples have to be taken on the same days and same time each month. This restriction is not supported in either the federal or state regulations. Moreover, it is impractical because sampling should occur on different days and different times to ensure that the City is getting representative data. For example, non-domestic users may vary operations. Sampling the same day of the month at the same time might miss fully characterizing their contributions. The requirement that samples be representative is all that is necessary (and typical of the vast majority of permits issued nationwide).

**Response 15**

EPA disagrees that this requirement should be removed from the permit. EPA confirms that a routine sampling plan is necessary to ensure that results yield consistently representative data. The flexibility requested in the comment could be used to catch variations in effluent data but it could also be used to avoid those variations or extreme events. The best way to ensure consistently representative data and avoid bias related to variability within a given day or week is through the development and implementation of a consistent routine sampling program. *See In re: City of Lowell*, 18 E.A.D. at 192-93 (E.A.B. 2020).

EPA also clarifies that the intent of this requirement is not to require that sampling be done at the exact same time every day of the month which could indeed preclude capturing the inherent variability of the effluent as described in the comment. Rather, the intent of this requirement is twofold. Firstly, it is to require the Permittee to set up a sampling program that would yield the most representative data, noting that the most representative sampling program may require setting different sampling times on different days with a given month. Secondly, it is to require the Permittee to adhere to this sampling program each month in order to ensure consistently representative data that can be analyzed for long term trends, etc.

EPA has broad authority under the Act to impose appropriate conditions in an NPDES permit that are rationally related to implementing the objectives of the Act, in this case, to ensure that the data collected to ensure compliance with permit limitations and achievement of water quality standards is representative.

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

**Comment 16**

**Footnote 7 – Narrative Requirement to Minimize Use of Chlorine**. The City objects to the narrative requirement that it minimize the use of chlorine while maintaining adequate bacterial control. The City has numeric limits for chlorine. As long as discharges are below those limits, there is no water quality issue at drought conditions, never mind at the more typical higher instream flows. Adding a requirement that the City must minimize the use of chlorine while still having to comply with the most stringent bacteria effluent limits we are aware of in the country makes no sense and sets the City up to fail. Such a limitation is also impermissibly vague and subjective. For these reasons, we ask that EPA delete the following sentence from Footnote 7:

"The Permittee shall minimize the use of chlorine while maintaining adequate bacterial control."

**Response 16**

EPA disagrees that this narrative requirement should be removed from the permit. EPA includes this narrative requirement in all municipal permits that employ chlorine disinfection. The requirement is intended to allow the Permittee to use as much chlorine as necessary to comply with the bacteria limits but prevents excessive use of chlorine beyond that amount. This is necessary because both bacteria and chlorine are potentially harmful pollutants that impact each other in the treatment process. Bacteria has the potential to impact human health, especially given the recreational and shellfishing uses of the receiving water. Chlorine, on the other hand, is highly toxic to aquatic life. EPA has included permit limits for both pollutants that represent the maximum allowable in the discharge but considers that any chlorine use beyond what is necessary to meet the bacteria limit should also be avoided as it has the potential to impact aquatic life before the discharge is fully mixed with the receiving water. Notably, excessive chlorine use would be more costly to the Permittee and the comment does not indicate any reason why using excess chlorine would be appropriate.

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

**Comment 17**

**Footnote 12 – Specified Weeks for Toxicity Testing**. This footnote unnecessarily requires that toxicity testing be performed during the same weeks during each quarter of the year. The City objects to this requirement. Such a requirement is not supported in EPA or the State's requirements. Toxicity testing simply must be representative. The City should be able to perform it at any time in each quarter. It makes no sense that once the City pick a week during any one quarter that we must stick with that same week forever? This is arbitrary and capricious. POTWs must have the flexibility to adjust sampling. For example, what if the City samples the last week of December but then a new industry comes to town and they shut down for maintenance that week? This requirement should be removed in favor of a requirement that WET testing be representative and collected during four different quarters.

The City understands that EPA's proposed Medium WWTF General Permit (MA590000) allows toxicity testing during any time during the calendar quarter. We think EPA should provide the same flexibility for individual permittees.

**Response 17**

In the context of collecting toxicity test samples, "same week" refers to one quarter to the next. For instance, a facility sampling twice per year starting the second week of March would need to sample during the second week of September. Allowing the Facility to choose which week during the calendar quarter it will sample gives the Facility flexibility concerning staff availability and coordination with laboratories. This will also ensure that samples are spaced evenly throughout the year, avoiding a sample being collected at the end of one calendar quarter and then at the beginning of another calendar

quarter. EPA confirms that this same language regarding the "same weeks" is included in the draft Medium WWTF General Permit (MA590000).

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

**Comment 18**

**Part I.A.2 – General Water Quality Standards Compliance**. On page 8, Section 2 imposes a requirement that:

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

This language is legally incorrect and fundamentally unfair. Legally, this provision deprives the City of its Clean Water Act permit shield in that the City will never know what it can or can't discharge at any given time. The provision deprives the City of its right to fair notice of what it must do to comply. More importantly, there is no opportunity for due process. In this context, due process is the City's (and all stakeholders') right to know what limits EPA/NHDES believe are warranted, an opportunity to comment on the correctness of such limits and the right to appeal such determinations. Moreover, for a public body, the provision deprives the City of a compliance schedule to come into compliance with a new or more stringent requirement.

We note that the State of West Virginia recently removed similar language from its NPDES permits. EPA Region 3 treated that action as a change to WV's NPDES permit program which triggered EPA review and approval. EPA approved the change by letter dated March 27, 2019 (incorporated herein by reference). EPA concluded that such language is not a requirement of the NPDES Permit program.

Finally, we note that this issue is currently before the 9th Circuit Court of Appeals (City of San Francisco case (Appeal No. NPDES 20-01)) with a decision expected any day now. The City incorporates by reference the briefs filed by the City of San Francisco in its pending appeal before the 9th Circuit.

For these reasons, the Paragraph 2 language must be removed from the City's permit. It impermissibly undermines the CWA permit shield, deprives the City of fair notice of what we can discharge and due process (opportunity to comment on, seek compliance schedules, and appeal effluent limits). It is inconsistent with other EPA Regions as demonstrated by the EPA Region 3 March 27, 2019 formal finding that such a permit condition is not required under the CWA.

**Response 18**

EPA disagrees with the commenter's assertion that the following provision is unlawful, unfair, and undermines the permit shield provision of the CWA: "The discharge shall not cause a violation of water quality standards of the receiving water." Draft Permit, Part I.A.2.

EPA's authority is not as narrowly constrained as the commenter implies. To the opposite, Section 402 of the Act authorizes EPA to issue an NPDES permit with conditions that ensure that the discharge will meet, among other things, the requirements of § 301 of the CWA. That provision includes § 301(b)(1)(c), which requires that a

discharge shall achieve "...any more stringent limitation, including those necessary to meet water quality standards...established pursuant to any State law or regulation...." (emphasis added). Nowhere does the statute specify that EPA may only impose specific numeric effluent limitations to meet state water quality standards. EPA's regulations at 40 C.F.R. § 122.44(d)(1) state that each permit shall include "any requirements in addition to or more stringent than promulgated effluent limitations guidelines.... necessary to achieve water quality standards...." While § 122.44(d) does require "effluent limits" to be established when EPA determines that a particular pollutant has the reasonable potential to cause or contribute to an in-stream excursion above a water quality criterion, the regulations do not require that all "effluent limitations" necessary to meet water quality standards be expressed in terms of specific pollutant by pollutant numeric limitations. They may be narrative in form, including for example, when they are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes or intent of the CWA. *See In re: City of Lowell,* 18 E.A.D. at 175-186. As explained below, this requirement narratively tracks a key, and unambiguous, provision of the NH WQS.

The language included in Part I.A.2 is both lawful and consistent with EPA Region 1's past practice. Exactly the broad narrative language to which the commenter objects is included in all New Hampshire NPDES permits and was included in the City's previous NPDES Permit (Part I.A.2(1) of the 2000 Permit). EPA includes this provision to ensure full implementation of Sections 301(b)(1)(C) and 402 of the Clean Water Act. 33 U.S.C. §§ 1311(b)(1)(C), 1342. *Northwest Envtl. Advocates v. City of Portland*, 56 F.3d 979, 990 (9th Cir. 1995) (concluding that "the statutory language, legislative history, and case law authorize citizens to enforce permit conditions stated in terms of water quality standards"). Moreover, this provision is also consistent with requirements under New Hampshire state law and regulations. The NH Statute at Section 485-A:12 (III) states,

> "No activity, including construction and operation of facilities, that requires certification under section 401 of the CWA and that may result in a discharge, as that term is applied under section 401 of the CWA, to surface waters of the state may commence unless the department certifies that any such discharge complies with the state surface water quality standards applicable to the classification for the receiving surface water body."

EPA's Draft Permit is consistent with, and derived from, this state requirement.

While the commenter may feel that the narrative prohibition is duplicative, EPA sees merit in including a more general, narrative, preventative permit provision that restates the commands of Section 301 and the implementing regulations at 40 C.F.R. §§ 122.4 and .44 to "ensure" compliance with quality standards, and that similarly mirrors the NH Statute at Section 485-A:12 (III). Doing so not only allows EPA to incorporate a legal assurance in the permit that water quality standards will be met, consistent with its obligations under sections 301 and 402 of the Act and NH WQS, but also will allow it to address, as necessary, water quality violations caused or contributed to by the Permittee

due to such circumstances as unanticipated changes in or alterations to effluent quality that might otherwise meet permit conditions or the discharge of pollutants not identified in the City's permit application, for example. Again, this requirement narratively tracks a key provision of the NH WQS, which EPA is not required to translate or express as a series of individual numeric limitations, but that it may instead frame as a narrative prohibition in furtherance of its obligation to include in permits conditions that ensure compliance with water quality standards, as it is incontrovertibly entitled to do under law. The "[Clean Water] Act permits enforcement of broad, narrative criteria." *PUD No. 1 of Jefferson Cty. v. Washington Dep't of Ecology*, 511 U.S. 700, 700 (1994).

The commenter claims that this provision is unfair and violates the due process rights of the permittee and its stakeholders. However, the commenter, in this case the permittee, has been operating under a permit that contains this provision since at least 2000. See *Ohio Valley Envtl. Coal. v. Fola Coal Co., LLC*, 845 F.3d 133, 144 (4th Cir. 2017) (finding that a permittee had fair notice of narrative water quality standards included in its permit due in part to the amount of time the permittee was bound by that language). The language in the permit clearly states what is required of the permittee: that the permittee ensure no violation of New Hampshire water quality standards. This narrative standard is consistent with the CWA and adequately puts the permittee on notice of its obligations. See *Upper Blackstone Water Pollution Abatement Dist. v. E.P.A*., 690 F.3d 9, 33 (1st Cir. 2012) ("EPA regulations [at 40 C.F.R. § 122.41(d)(1)(i)] require permitting authorities to include in NPDES permits conditions which 'control all pollutants or pollutant parameters ... [that] are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.'").

Moreover, the permittee has been aware of EPA's application of such narrative water quality standards since the last permit reissuance of 2000. New Hampshire's water quality standards are fully available to the public, as codified in the New Hampshire Code of Administrative Rules, Surface Water Quality Standards, Chapter Env-Wq 1700, *et seq*. *See also generally*, N.H. Rev. Stat. Title L, Water Management and Protection, Chapters 485-A, Water Pollution and Waste Disposal. To the extent that the commenter states that the public is precluded from an opportunity to comment on or appeal such water quality standards, this is incorrect. In fact, the notice-and-comment procedures as well as the appeal procedures required pursuant to the CWA and its regulations provide just such opportunity (33 U.S.C. § 1369(b); 40 C.F.R. § 124.19), and in submitting the above concerns during the public comment period, the commenter has availed itself of that procedure.

The commenter generically mentions due process violations but fails to specify whether it refers to substantive or procedural violations and further fails to identify with particularity how EPA's action is inconsistent with the requirements for ensuring either type of due process in this particular setting. See, e.g., *Mathews v. Eldridge*, 424 U.S. 319 (1976) (identifying factors for assessing a procedural due process violation); *Collins v. City of Harker Heights, Tex*., 503 U.S. 115 (1992) (outlining what constitutes a substantive due process claim). EPA is not required to develop arguments on behalf of a

commenter.

As for the commenter's reference to the March 27, 2019, letter from EPA Region 3 to the State of West Virginia, this letter is specific to the State of West Virginia and its revisions to its authorized NPDES program. Changes to the authorized NPDES program and state water quality standards in West Virginia have no bearing on the EPA's implementation of the NPDES program in New Hampshire. As stated above, EPA's inclusion of Part I.A.2 is consistent with law and regulations and ensures that the permit is in compliance with New Hampshires' State Certification and water quality standards.

Finally, the commenter's assertion that this provision deprives it of its Clean Water Act permit shield is entirely without merit. Section 402(k) of the Clean Water Act, 33 U.S.C. § 1342(k), establishes the "permit shield" by stating "[c]ompliance with a permit issued pursuant to this section shall be deemed compliance" with section 301 (among other sections) of the CWA. In order to avail itself of the protections of section 402(k), a permittee must first be in compliance with all express terms of the permit. See *Ohio Valley Envtl. Coal. v. Fola Coal Co.*, LLC, 845 F.3d 133, 142 (4th Cir. 2017) ("[A] permit shields its holder from liability as long as the permit holder complies with the express terms of the permit and with the Clean Water Act's disclosure requirements." (internal quotations omitted)). Courts have clearly held that narrative water quality standards are express terms when included in an NPDES permit. Id. at 144; *PUD No. 1 of Jefferson Cty. v. Washington Dep't of Ecology*, 511 U.S. 700, 700 (1994) (The "[Clean Water] Act permits enforcement of broad, narrative criteria."); *Nat. Res. Def. Council v. Metro. Water Reclamation Dist. of Greater Chicago*, 175 F. Supp. 3d 1041, 1053–54 (N.D. Ill. 2016) (The NPDES Permit "incorporates the WQS as substantive terms of the permit, compliance with which is required in order for the permit shield to apply. . . . [T]he permit shield defense can apply only if the three WRPs' effluent does not cause violations of the Illinois WQS."). Thus, when included in a permit, narrative water quality standards are enforceable conditions that must be met for the permittee to invoke the permit shield provision of the CWA. The permittee is not deprived of the protections afforded by section 402(k). Rather, the permittee is required, as is always the case, to comply with all its permit terms prior to invocation of the permit shield. The City's concern the narrative prohibition will deprive it of its ability to comply with a new or more stringent requirement according to a schedule is misplaced, as the permit limit together with schedule comprise the enforceable effluent limitation. So long as the City is complying with the terms of a compliance schedule for a given limit, it will not be subject to an enforcement action for failing to meet a final limit not yet in effect, and it can avail itself of the permit shield.

EPA is aware of the pending City of San Francisco matter in the 9th Circuit Court of Appeals. Notably, that case is an appeal of Environmental Appeals Board decision upholding a nearly identical permit provision as the one the City objects to here. *See In re: City and County of San Francisco*, 18 E.A.D. 322, 338-350 (E.A.B. 2020). This decision followed on the heels of the E.A.B. affirming Region 1's use of such a permit term. *See In re: City of Lowell,* 18 E.A.D. at 175-186. Thus, the current state of the law clearly authorizes the Region's use of such a permit provision.

**Comment 19**

Section C.2 – Preventive Maintenance Requirements. Section C.2 requires the permittee to do the following (emphasis added):

2. Preventive Maintenance Program
The Permittee and Co-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 Collection System O&M Plan required pursuant to Section C.5. below.

EPA well knows that preventing overflows/bypasses caused by infrastructure failures and/or malfunctions is impossible. The City can work to "minimize" such failures or "minimize to the maximum extent practicable" but we can't guarantee against such failures. Sewer pipes well within their useful lives will rupture without any warning. Overflows which reach surface waters are violations of the Clean Water Act. The City is concerned that this language (we must prevent all such overflows) creates a duplicative violation (one for the overflow and one for violating this permit condition that we must prevent such overflows). Accordingly, the City asks that EPA simply require proper operation and maintenance of the POTW as the industry standard requirement.

**Response 19**

EPA disagrees that preventing overflows/bypasses caused by infrastructure failures and/or malfunctions is impossible. The term "preventative maintenance" is a common term and implies that maintenance activities should not merely be reactive to system failures after they occur but should be proactive to predict where the most likely failures and/or malfunctions may occur and maintain those areas expeditiously before they occur. Such a maintenance program would effectively prevent many overflows/bypasses from occuring. The Region has routinely included such permit terms for WWTFs. EPA views this provision, in part, as implementing the regulation at 40 CFR § 122.41(e), which requires the proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions.

EPA acknowledges that even a robust preventative maintenance plan may not prevent all system failures and/or malfunctions. Importantly, this permit provision does not require that all such failures be prevented but simply requires that the Permittee "maintain a preventative maintenance program" *designed* to identify and prevent such overflows and bypasses. As long as such a program in accordance with this provision is developed and implemented to the maximum extent practicable, an actual system failure would not be considered a violation of this permit provision. Although, as the comment notes, an overflow which reaches a surface water would still be considered a violation of the Clean Water Act even if it occurred despite the Permittee's best efforts to prevent it.

**Comment 20**

**Paragraph 3 - Controlling Inflow and Infiltration.** This provision requires the City to control inflow/infiltration to **prevent** high flow-related overflows and/or permit non-compliance. The

City is concerned, again, that this language creates double liability for the City in the event of capacity-related sewer overflows (regardless of storm size) or effluent exceedances at the treatment plant during high flow periods. The City suggests that the requirement be modified to require an I/I program to minimize, to the extent practicable, high-flow-related overflows (which, except as otherwise provided herein, are not authorized by this permit).

**Response 20**

Similar to Response 19, this is a standard condition that the Region has routinely included in permits for WWTFs. EPA similarly views this provision, in part, as implementing the regulation at 40 CFR § 122.41(e), which requires the proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. EPA does not view this permit provision as subjecting the Permittee to "double liability" in the event of a capacity-related SSO or WWTF effluent violation. Rather, as explained in the Fact Sheet at 29, the provision requires the Permittee to "develop an I/I removal program commensurate with the severity of I/I in the collection system. This program may be scaled down in sections of the collection system that have minimal I/I." To the extent there is a violation of this provision, it would be the City's failure to develop and implement an I/I removal program.

**Comment 21**

**Collection System Mapping Requirement.** The City objects to the requirement in Section 4.k that we include on our collection system map the following:

> k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.
>
> This level of detailed information will require years of further work to develop and include in our maps. Some of this information may not be attainable. Accordingly, the City suggests the following revision:
>
> k. To the extent known and/or discoverable over time during the normal course of utility operations: The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

**Response 21**

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

**Comment 22**

**Paragraph E. Pretreatment Program Development.** The City requests eighteen (18) months to implement the pretreatment program requirements associated with this permit. Although the City has made initial efforts to move toward the implementation of a formal program in anticipation of this requirement, the City is experiencing difficulties retaining and hiring personnel in the wastewater field, a situation faced by many municipalities. The additional time will also allow for a full budget cycle to plan for the additional costs associated with the program along with the time to implement the updates to local ordinances needed to enforce the new program.

**Response 22**

EPA acknowledges the issue with retaining and hiring personnel in the wastewater field. In consideration of this matter, EPA has extended the deadline for submittal of the pretreatment program to eighteen (18) months from the effective date of the permit.

**Comment 23**

**Permit Page 13, Section b(3) incorrectly requires that the City ensure industrial user compliance**. The City cannot "ensure" that industrial dischargers will comply with all requirements any more than the police can ensure there will be no crime or the fire department can ensure there will be no house fires. The City can require compliance and that is what this permit provision should do, as follows:

(3) Control, through permit, contract, order, or similar means, the contribution to the POTW by each industrial user to ~~ensure~~ require compliance with applicable pretreatment standards and requirements;

**Response 23**

The permit language noted in the comment is taken directly from the Pretreatment Regulations at 40 CFR Section 403.8(f)(1)(iii) which cannot be revised as part of this permit action.

EPA disagrees with the commenter's interpretation of the provision. For example, EPA must write NPDES permits to "ensure" compliance with the Clean Water Act and State water quality standards. That does not mean EPA must ensure that there will never be a permit violation, but simply that the terms of the permit itself (if complied with) will ensure compliance with such regulations and that EPA is responsible to enforce against any violations. In like manner, the terms of the permit, contract, or order used by the Permittee to control the contribution to the POTW by each industrial user (if complied with) must ensure compliance with applicable pretreatment standards and requirements and the Permittee is required to enforce against any violations.

**Comment 24**

**Same as above – please make the following change to subparagraph b(5)**:

(5) 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. Representatives of the POTW shall be authorized to enter any premises of any industrial user in which an effluent source or treatment system is located or in which records are required to be kept under 40 CFR Section 403.12(o) to ~~assure~~ evaluate compliance with pretreatment standards. Such authority shall be at least as extensive as the authority provided under Section 308 of the CWA.

**Response 24**

The permit language noted in the comment is taken directly from the Pretreatment Regulations at 40 CFR Section 403.8(f)(1)(v) which cannot be revised as part of this permit action.

Similar to Response 23, EPA considers the term "to assure compliance" to mean the Permittee must perform whatever inspections, surveillance and monitoring procedures are necessary to determine that the industrial user is in compliance with pretreatment standards and must enforce against any violations. This language does not mean that the actual inspections, surveillance and monitoring procedures will result in such compliance.

**Comment 25**

**Permit Page 14, Subparagraph E(3) should be clarified**. We believe that the following permit provision should be clarified in terms of how our pretreatment program "is subject to revisions by EPA". Specifically, EPA should clarify the process by which any changes that EPA may desire will be effected.

3. The Permittee's complete pretreatment program is subject to revisions by EPA during the term of this permit and prior to renewing this permit under Section 301(h) of the CWA.

**Response 25**

Revisions to the IPP do not typically require a modification to the permit. For example, a permit modification is not required when the Permittee is notified of EPA's approval of local limits, or when updating local limits or sewer use ordinances which are done by letter or enforcement order (if needed). In other words, EPA would not modify the IPP via the NPDES permit.

**Comment 26**

**Subparagraph F.4 should be clarified**. Subparagraph F.4 should be clarified as follows given that the City can require SIU compliance but the City cannot assure that compliance. If an SIU violates their permit, EPA could argue the City has violated our requirement to "assure" the SIUs don't violate their permits. Again, the City can prohibit things but we can't guarantee no non-compliance by its non-domestic users.

The Permittee must ~~assure~~ require that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal Regulations at 40 CFR § 405 et seq.

**Response 26**

See Responses 23 and 24. Similarly, EPA considers the term "assure" to mean it is the Permittee's responsibility that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW and must enforce against any violations.

This comment, as well as Comments 23, 24 and 27, seem to suggest a misunderstanding that the Permittee does not have the authority to guarantee compliance of industrial users with applicable pretreatment standards. EPA disagrees and notes that when the Permittee did not have an Industrial Pretreatment Program (IPP) it was EPA's responsibility to directly oversee the industrial users contributing wastewater within the system. However, once the IPP under this permit becomes effective it will then become the responsibility of the Permittee to directly oversee these industrial users to assess and assure that they are in compliance with all pretreatment standards. Therefore, the Permittee must bear all responsibility to assess and assure compliance by requiring compliance and by properly addressing any non-compliance. Additionally, 40 CFR 403.8 and 12 specifically state that "The Control Authority shall require that frequency of monitoring necessary to assess and assure compliance by Industrial Users with applicable Pretreatment Standards and Requirements."

**Comment 27**

**The City cannot "assure" categorical user compliance.** The City objects to the following requirement in Section F.4: "The Permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal Regulations at 40 CFR § 405 et seq."
The City cannot "assure" compliance by any users of its system. This provision should be removed or changed to say that "the City shall require that all categorical industrial users comply with applicable National Categorical Pretreatment Standards."

**Response 27**

See Response 26 above.

**Comment 28**

**We object to the vague and overly broad PFAS sampling requirements**. Section F.6 on page 16 would require annual sampling of the "following types" of indirect dischargers for PFAS chemicals. The City fails to see why such sampling is necessary given the other sampling that will take place under this permit and the current evolving regulations regarding PFAS.

Also, the requirement is impermissibly vague with its statement for example to sample every very other "known or suspected source". As has been well documented, PFAS compounds are ubiquitous in the environment and without more specificity this requirement is overly broad. Also, how does one sample a Centralized Waste Treater once per year and get a representative sample? How do we sample "contaminated sites"? This requirement should be removed from the permit. If EPA insists on keeping this requirement, over our objection, the City requests the amount of sampling be reduced dramatically. The term in the table "Maximum Daily" is not consistent with

a single annual grab sample form these industrial dischargers and should be changed to "Value" or "Concentration".

**Response 28**

EPA has broad authority under the CWA and NPDES regulations to prescribe the collection of data and reporting requirements in NPDES Permits. See, e.g., CWA § 308. As discussed in the Fact Sheet at pages 25-27, the purpose of this monitoring and reporting requirement is "to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility-specific basis." These permitting decisions may include whether there is reasonable potential to cause or contribute to a violation of the State water quality standards in the next permit reissuance, and if there is, to inform the development of numeric effluent limits or pollutant minimization practices, or some combination thereof.

With regards to industrial users (IUs), EPA notes that testing likely sources of PFAS is an important step to inform future decisions regarding source reduction from IUs.

Regarding "Contaminated Sites," EPA agrees that this language is somewhat vague and clarifies that this refers to "Known or Suspected PFAS Contaminated Sites" and has updated the Final Permit accordingly. If such a site contributes flow to the POTW then a representative sample of that flow must be obtained and sampled annually.

Regarding "Any Other Known or Expected Sources of PFAS," the Permittee should require such monitoring for any other IUs that they have reason to believe may be a source of PFAS to the POTW. Further guidance is available on "Any Known or Expected Sources of PFAS" in the *Technical Resources for Addressing Environmental Release of Per- and Polyfluoroalkyl Substances (PFAS)*[7], specifically in section 2.5. Permittees may use this list to identify, at their discretion, which IUs are potential sources of PFAS. Given the availability of this guidance, Part I.F.6. of the Final Permit remains unchanged from the Draft Permit.

Regarding a Centralized Waste Treater, EPA acknowledges the inherent variability of the waste streams throughout the year and agrees that a single annual sample may not be representative of the entire year. The requirement to obtain a representative sample from such a facility simply requires that the sample be taken on a typical day and must be representative of the co-mingled effluent waste stream on that day.

Regarding the commenter's request for a reduction in sampling requirements, EPA does not consider such reductions appropriate at this time in order to obtain enough data points to fully characterize the potential sources of PFAS throughout the collection system given that there may be potential sources that have inherent variability. However, EPA will evaluate all available data in the next permit reissuance and may reduce PFAS monitoring based on all available information at that time.

[7] https://pfas-1.itrcweb.org/

Finally, EPA asserts that "Maximum Daily" is appropriate given that the annual sampling will occur on a single day and the result will represent the maximum value on that day.

Therefore, this comment results in a single change to the Final Permit replacing the term "Contaminated Sites" in Part I.F.6 with "Known or Suspected PFAS-Contaminated Sites."

**Comment 29**

**Section H.3 requires Arsenic minimization optimization.** The City disagrees with this requirement. EPA has already imposed a monthly average loading limit for Total Arsenic in Part I.A. Compliance with that "hold the load" level is all that should be required for this permit. We believe that the vast majority of arsenic that enters our system comes from naturally occurring arsenic in groundwater which enters our system through inflow and infiltration. The City is unable to do any optimization of such flows outside of our ongoing I/I reduction efforts.

Until an updated water quality-based limit is established in a future permit, as long as the City is complying with the arsenic mass limit, we should not have to implement an arsenic minimization program.

**Response 29**

As noted in its antidegradation review letter dated March 15, 2022, due to industrial source contributions to the Pease WWTF's (which comprise a significant percentage of the WWTF's increased flow), NHDES found it necessary to incorporate arsenic source identification and reduction (i.e., optimization) measures in the Draft Permit in order to ensure that industrial arsenic inputs to the WWTF are not increased. However, EPA and NHDES agree that the "hold the load" limit being established in this permit is sufficient to ensure that the overall discharge of arsenic does not increase and this optimization requirement is not necessary. Therefore, the arsenic optimization requirement has been removed from the Final Permit.

**Comment 30**

**Section J.9 NHDES Shellfish Harvesting Procedures.** It is unreasonable for the NHDES Shellfish Program to expect the City to make multiple notifications (via phone, pager, etc.) of a possible high bacteria loading or high flow event. Incidents leading to a possible high loading and high flow event will mandate that the facility's staff be conducting critical operational duties. The notification should be made to the cell phone number provided, it should be up to the Shellfish Program to arrange proper access to said number for its own staff.

**Response 30**

Section I.J.9 of the permit says, "Notification shall be made using the program's cell phone number. If Shellfish Program staff are not available to answer the phone, leave a message describing the issue or situation and provide your contact information, including phone number. Then, call the Shellfish Program's pager and enter a call back number. Upon initial notification of a possible high bacteria/virus loading event, Shellfish

Program staff will determine the most suitable interval for continued notification and updates on an event-by-event basis."

To clarify the language in Section I.J.9, all notifications will not require the permittee to call both the Shellfish Program's phone number and pager. Notification using the Shellfish Program's pager is only required if Shellfish Program staff do not answer the phone. Due to the nature of their work, Shellfish Program staff may be working in areas that do not have cell phone coverage. If the staff are in an area without cell phone coverage at the time that the permittee calls, they may not receive a record of the call or even the voicemail. The Shellfish Program staff carrying the pager will always physically be within the pager service area, so they will always receive a page that is sent. Then they will be able to listen to the voicemail, or if it did not record, they will know to return the permittee's call, thus allowing them to respond to the notification in a timely manner.

Therefore, this comment does not result in any change to the Final Permit.

**Comment 31**

**Attachment B Pretreatment Program Development and Approval Standard Requirements**

**Chapter 3 – Local Limits.** It is unclear why zinc is specifically called out in this paragraph. May be related to another community and should be removed.
**Chapter 6 – Compliance Monitoring.** Reference is made to "Northbridge". This appears to be an error and reference to another community or specific industrial user. Please remove this reference.

**Response 31**

The City is correct that the language in these two sections was developed for a different permit and do not apply to this permit. Therefore, Attachment B has been revised in the Final Permit to remove this language.

**Comment 32**

In Part 1.A.1 footnote 12 on page 7 of the draft permit, the WET tests are to be conducted on "the inland silverside minnow, Menidia beryllina, and the mysid shrimp, Mysidopsis bahia" and tests are be done in compliance with Attachment A of the draft permit. In Attachment A, it is noted that the test organisms are to be "Mysid Shrimp (Americamysis bahia) and Inland Silverside (Menidia beryllina)". The current permit requires testing of Menidia beryllina and Mysidopsis bahia and the City believes Attachment A should be modified so that Mysidopsis bahia replace Americamysis bahia.

**Response 32**

The Mysid shrimp species required to be used for WET tests has been changed and is reflected in the revised WET testing protocol which was included as Attachment A of the Draft Permit. Although they are the same species of Mysid shrimp, the species Americamysis bahia replaced the Mysidopsis bahia, which was required by the prior test protocol. Footnote 12 on Page 7 has been corrected to note that the current protocol lists Americamysis bahia, rather than the Mysidopsis bahia, as the Mysid shrimp to be tested.

**Comment 33**

## FACT SHEET COMMENTS

**1.0 Proposed Action.** This section summarizes the history of the permit. The Fact Sheet should clarify that the entity holding the original 2000 permit was the Pease Development Authority. The City of Portsmouth assumed responsibility under that permit for wastewater treatment operations for outfall 005 for the Pease Wastewater Treatment Facility. The City acknowledges responsibility for wastewater operations under this new permit.

**3.1 Location and Type of Facility.** Paragraph 2, please clarify the language as follows:

"Currently, the Facility serves approximately 9,000 ~~residents~~ persons and the businesses and industries at the Pease International Tradeport in Portsmouth, NH, with the collection system primarily focused along ~~Arthur F. Brady~~ Corporate Drive and International Drive ~~Market Street~~."

**3.1.1 Treatment Process Description.** Paragraph 1, please clarify the language as follows:

"Influent enters the Facility and flows through a ~~grinder,~~ mechanical bar screen and grit chamber~~, and mechanical screen~~."

Paragraph 1, last sentence, replace the word "…bisulfate…" with "…bisulfite…".

Paragraph 3, the sludge processing description as written is not accurate. Sludge is not air dried and is not incinerated. Below is a summary of the sludge handling operations:

Waste primary sludge is pumped from the primary clarifiers to a sludge holding tank. Waste sludge from the sequencing batch reactors is also pumped to the sludge holding tank. The combined sludge is then dewatered by a belt filter press following chemical addition of polymer and potassium permanganate. The dewatered sludge is transported and disposed under contract with Turnkey Landfill in Rochester, NH for use as daily cover. The mass of sludge shipped to the landfill was 139 dry metric tons in 2020 and 189 dry metric tons in 2021.

**5.1.7 Total Residual Chlorine**. The paragraph states the City will be moving to an ultraviolet (UV) disinfection system. This wording should be deleted. The City is evaluating this as an option but needs to consider the details and costs particularly given the extremely stringent daily maximum bacteria effluent limits and other considerations.

**Response 33**

All of these corrections are noted for the record. However, the Fact Sheet cannot be changed once the Draft Permit has been public noticed.

## B. Comments from Comments from Gretchen Young, P.E., City of Dover, New Hampshire, on May 16, 2022:

### Comment 34

The City of Portsmouth, through the recent Total Nitrogen General Permit and permittees' creation of the associated Adaptive Management Plan (AMP), has committed substantial resources, both financial and otherwise, toward the monitoring and scientific research surrounding water quality in the Great Bay. This permit introduces many new and increased requirements that may necessitate that Portsmouth reallocate those resources and reduce the support they can give to the larger water quality adaptive management efforts.

Part I.A. requires many new or more frequent measurement of Effluent Characteristics, Ambient Characteristics, Influent Characteristics and Sludge Characteristics. This additional water testing and monitoring is excessive and onerous to the community. It is requested that EPA reduce or eliminate the measurement frequency of many of these parameters.

### Response 34

EPA notes that the above comment does not raise specific objections to the monitoring frequencies in the Draft Permit, which are commensurate with those of similarly-sized WWTFs. EPA considers that each of these monitoring requirements is necessary to effectively regulate this discharge under the CWA. EPA has broad authority under the CWA and NPDES regulations to prescribe the collection of data and reporting requirements in NPDES Permits. See CWA § 308. The monitoring frequencies in the Final Permit remain unchanged from the Draft Permit.

EPA recognizes that these monitoring requirements entail a moderate cost that must be balanced with other costs, such as those associated with the requirements of the Great Bay Total Nitrogen General Permit.

### Comment 35

Part I.A. now requires total and inorganic arsenic monitoring of the effluent, however, NHDES has stated that naturally occurring arsenic contamination is widespread in New Hampshire water and groundwater. It is unclear what will be gained from such frequent (2/month) testing of the effluent.

### Response 35

Given that the arsenic concentrations in the Pease WWTF effluent are greater than those detected in the ambient samples[8], the Pease WWTF having numerous industrial inputs, and the majority of the increased flow authorized by the Draft Permit being contributed by industrial sources, the monitoring frequency for total and inorganic arsenic is not unreasonable. Rather, the total arsenic monitoring is necessary to ensure compliance with the effluent limitation established in the permit and the inorganic arsenic sampling will be

[8] NHDES to City of Portsmouth, NH. March 4, 2020. Pease Wastewater Treatment Facility Antidegradation Review. NPDES Permit No. NH0090000. NHDES to U.S. EPA. March 15, 2022. Update to Pease Wastewater Treatment Facility Antidegradation Review. NPDES Permit No. NH0090000.

helpful to determine the fraction of inorganic arsenic in the effluent (given that the human health criterion is based on inorganic arsenic). In addition, the twice per month monitoring frequency for total and inorganic arsenic established in the Draft Permit was based upon, and is consistent with *EPA/NHDES-WD Effluent Monitoring Guidance* for facilities not using lagoons or sand filters for secondary treatment. This guidance specifies monitoring frequencies for each parameter based on the type of treatment employed that will provide data that is representative of the discharge. The monitoring frequency for arsenic in the Final Permit remains unchanged from the Draft Permit.

**Comment 36**

Part I.F.6. requires that annual sampling be conducted on a known or expected source of PFAS. It is understood by the scientific community that PFAS represents a family of man-made chemicals that are ubiquitous in the environment, world-wide. It is unclear how known or expected sources of PFAS would be identified.

**Response 36**

See Response 28.

**Comment 37**

It is requested that EPA and NHDES regulate the use of PFAS compounds in consumer products. The elimination of PFAS from consumer goods and industrial products would be the most effective method of reducing the concentration of these compounds in wastewater and ultimately the environment.

**Response 37**

The commenter suggests that EPA focus on reducing PFAS at the source rather than requiring WWTFs to bear the cost of sampling and treatment to reduce effluent levels. EPA agrees that the concern regarding PFAS is a much broader issue than the scope of this NPDES permit (i.e., source reduction through the regulation or prohibition of the use of PFAS compounds in consumer products) and EPA is taking steps to address it, as outlined in EPA's *PFAS Strategic Roadmap* published in 2021[9]. As suggested in the comment, much work still needs to be done beyond the scope of this permit related to studying impacts to the environment and human health and addressing source control of PFAS compounds. EPA agrees that reducing the source of PFAS is a necessary aspect of addressing the overall environmental impact, but not the only aspect. Given that PFAS chemicals have been in use since the 1940s and found in a wide array of consumer and industrial products, mere source reduction will not fully resolve the persistent impact of PFAS chemicals already in the environment. Therefore, in addition to source reduction EPA must also assess the potential environmental impact where PFAS may accumulate, such as at WWTFs.

[9] https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf

**Comment 38**

The introduction of new monitoring requirements for the PFAS compounds is understood to determine whether the compounds are present in facility discharges and not to collect data that will be used to establish future numerical concentration or mass-based permit limits in their effluent or sludge. It is important that this be made explicitly clear in the final permit and associated response to draft permit comments.

**Response 38**

Contrary to the comment, EPA intends to use these data for a variety of water quality and permitting purposes as noted in the *PFAS Strategic Roadmap*[10]. If PFAS water quality standards (WQSs) are established in the future, EPA notes that these data may be used as part of EPA's analysis in establishing effluent limits to ensure the protection of such WQSs in a future permitting action.

**Comment 39**

The reporting requirement for the PFAS compounds does not allow for a reduction in measurement frequency. It is requested that a permittee be provided a means of seeking and securing a reduced measurement frequency should the facility demonstrate PFAS compound concentrations below the New Hampshire AGQSs for four (4) consecutive monitoring events.

**Response 39**

This comment suggests that EPA incorporate an "off ramp" to reduce or remove PFAS sampling if 4 consecutive results are below a certain level. EPA does not consider it appropriate to provide any "off ramps" within this initial permit term in order to fully characterize the discharge given that there may be potential sources that have inherent variability. However, EPA will evaluate all available data in the next permit reissuance and may reduce PFAS monitoring based on all available information at that time. Also see Response 10.

**C. Comments from Gretchen Young of the New Hampshire Water Pollution Control Association, on May 16, 2022:**

**Comment 40**

Part I.A.1., Ambient Characteristics, requires a measurement frequency of 1/quarter. It is requested that EPA modify the measurement frequency to 1/year to match other recently issued New Hampshire NPDES permits.

**Response 40**

Monitoring frequencies for ambient characteristics are established on a case-by-case basis. The analysis of several of these parameters is required to be conducted as part of Whole Effluent Toxicity testing (see Attachments A and B, Part VI. CHEMICAL ANALYSIS, to the Draft and Final Permits). As such, the ambient monitoring frequency mirrors the WET testing schedule. Based on Response 11, the WET testing and the related ambient monitoring are being reduced to twice per year. While it is not clear

[10] https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024

regarding which other New Hampshire NPDES permit the comment refers, EPA has determined that this twice per year monitoring is be necessary and appropriate for this discharge.

**Comment 41**

Part 1.E.6. requires that annual sampling be conducted on a list of multiple types of industrial discharges into the POTW, subject to the availability of a multi-lab validated method for wastewater sampling of four (4) specific PFAS compounds. While several of the listed types of industrial discharges can be determined based on the OSHA Standard Industrial Classification (SIC) Manual, a number of others may not be identifiable by the permittee, as follows:

a. Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or Teflon type coatings. It is unclear whether SIC Manual guidance explicitly lists industries that may produce PTFE or Teflon coated parts as part of their manufacturing process.

b. Any Other known or Expected Sources of PFAS. It is understood by the scientific community that PFAS represents a family of man-made chemicals that are ubiquitous in the environment, world-wide. The EPA online document titled Understanding PFAS in the Environment, which may be found at https://www.epa.gov/sciencematters/understanding-pfas-environment. notes that "PFAS are found in everyday items such as food packaging and non-stick, stain repellent, and waterproof products, including clothes and other products used by outdoor enthusiasts. PFAS are also widely used in industrial applications and for firefighting. PFAS can enter the environment through production or waste streams and are very persistent in the environment and the human body." Based on this understanding, it is unclear how known or expected sources of PFAS would be identified.

Accordingly, we request that this list be modified to remove these two (2) bulleted items from the list.

**Response 41**

EPA has issued guidance for identifying PFAS sources. Regarding Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or Teflon type coatings, *EPA's Toxic Release Inventory* program has provided guidance for identifying industries that may include organic coating operations (e.g., PTFE or Teflon coating) as a means for permittees to identify potential IUs that would be subject to this monitoring requirement. [11] Permittees may contact IUs within the listed industries to determine whether they use PTFE or Teflon to further narrow the scope of this requirement.

See Response 38 regarding guidance for the identification of known or suspected sources of PFAS.

[11] Table 2-2 at https://ordspub.epa.gov/ords/guideme_ext/f?p=guideme:gd:::::gd:spray_2_2

Given the availability of these guidance documents, EPA has determined that it is possible for the permittees to identify these potential sources of PFAS and therefore, these two bulleted items will not be removed from the Final Permit.

**Comment 42**

It is requested that EPA and NHDES regulate the use of PFAS compounds in consumer products. The elimination of PFAS from consumer goods and industrial products would be the most effective method of reducing the concentration of these compounds in wastewater and ultimately the environment.

**Response 42**

See Response 37.

**Comment 43**

The introduction of new monitoring requirements for the PFAS compounds is understood to determine whether the compounds are present in facility discharges and not to collect data that will be used to establish future numerical concentration or mass-based permit limits in their effluent or sludge. It is important to the NHWPCA membership that this be made explicitly clear in the final permit and associated response to draft permit comments.

**Response 43**

See Response 38.

**Comment 44**

The reporting requirement for the PFAS compounds does not allow for a reduction in measurement frequency. It is requested that a permittee be provided a means of seeking and securing a reduced measurement frequency should the facility demonstrate PFAS compound concentrations below the New Hampshire AGOSs for four (4) consecutive monitoring events.

**Response 44**

See Response 39.

## D. Comments from Tom Irwin, Vice President for New Hampshire of Conservation Law Foundation, on May 16, 2022:

**Comment 45**

**The Draft Permit's Effluent Limitation for Total Suspended Solids Fails to Ensure Compliance with State Water Quality Standards.**

As the Fact Sheet for the draft permit acknowledges, "[t]he Piscataqua River, segment NHEST600031001-02-01, is listed in the final State of New Hampshire 2018 List of Threatened or Impaired Water that require a TMDL as a Category 5 'Waters Requiring a TMDL.' The pollutants requiring a TMDL are estuarine bioassessments, polychlorinated biphenyls, and dioxin (including 2,3,7,8-TCDD)." 2022 Fact Sheet at 15. With specific regard to its aquatic life

integrity designated use, the receiving water body is suffering "Severe Impairment." *Id.* This impairment designation is part of, and consistent with, a trend throughout the estuary involving the significant loss of eelgrass – the estuary's cornerstone habitat – in terms of both cover and biomass.

To address impairments in the estuary associated with aquatic life uses and the loss of eelgrass, EPA has appropriately focused its efforts primarily on nitrogen. However, there exist other factors – in addition to and in combination with nitrogen – that are contributing to existing impairments. One of those factors is the presence of suspended solids,[12] which have significantly increased at nearby locations – namely, monitoring stations in the Upper Piscataqua River and at Adam's Point. *See* PREP, *Environmental Data Report, Dec. 2017* (excerpt provided herewith) at 16, 18.

The draft permit includes technology based effluent limitations ("TBELs") for Total Suspended Solids, adopting the identical TBELs (both in terms of concentration and load) that were part of the Pease WWTF's current permit, issued in 2000. Importantly, while the draft permit includes a new requirement that TSS removal of ≥85 percent be achieved on a monthly average basis, the draft permit's technology-based effluent limits for TSS do not ensure compliance with state water quality standards.

As EPA acknowledges in the Fact Sheet for the draft permit, water quality-based effluent limitations are "necessary when less stringent TBELs would interfere with the attainment or maintenance of water quality criteria in the receiving water." 2022 Fact Sheet at 5 (citing CWA § 301(b)(1)(C) and 40 CFR §§ 122.44(d)(1), 122.44(d)(5)). As EPA further states: "If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain WQBELs for that pollutant." *Id.* at 8 (citing 40 CFR § 122.44(d)(1)(i)). *See also* 40 CFR § 122.4 ("No permit may be issued: . . . (d) When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states.").[13]

Suspended solids have been identified as a significant factor undermining the health of the Great Bay estuary. The Piscataqua Region Estuaries Partnership ("PREP"), part of EPA's National Estuaries Program, specifically identified total suspended solids as a "pressure indicator" for the Great Bay estuary in its 2018 *State of Our Estuaries* report. *See* PREP, *State of Our Estuaries (2018),* provided herewith, at 15. PREP's report identifies TSS as a "cautionary" trend for the estuary and explains that "[i]ncreasing suspended sediments reduce water clarity and impact primary producers such as eelgrass, seaweeds, and phytoplankton." *Id.* Importantly, PREP, with

[12] *See* PREP, *Environmental Data Report, Dec. 2017* (excerpt provided herewith). *See also* Steward, J.S. and W.C. Green. 2007. Setting load limits for nutrients and suspended solids based upon seagrass depth-limit targets. Estuaries and Coasts 30:657-670 (provided herewith).

[13] EPA's apparent approach in the draft permit of proposing effluent limits "that ensure that the increased discharge results in *no more than an insignificant degradation of water quality* in the Piscataqua River and the downstream waters," 2022 Fact Sheet at 15, is contrary to this standard and should not be relied up on to finalize the permit's effluent limitations and other conditions.

the support of its Management Committee, has adopted the goal of "NO INCREASING TRENDS FOR TOTAL SUSPENDED SOLIDS." *Id.*

As discussed above, the Upper Piscataqua River and Adam's Point monitoring stations have demonstrated significant increases in suspended solids. Such increases contribute to the loss and degraded health of the estuary's eelgrass habitat and associated impairments under the Clean Water Act. To ensure that the Pease WWTF does not cause or contribute to water quality standards violations, EPA, in finalizing the permit, should replace its proposed TBELs for TSS with water quality-based effluent limitations. In doing so – and to be consistent with PREP's goal of "NO INCREASING TRENDS FOR TOTAL SUSPENDED SOLIDS" and ensure the permit does not cause or contribute to water quality standards violations, EPA should develop TSS WQBELs that result in an *actual* reduction in the discharge of TSS and, at the very least, ensure that historic TSS loads from the Pease WWTF do not increase.[14]

**Response 45**

EPA agrees with the comment that "there exist other factors – in addition to and in combination with nitrogen – that are contributing to existing impairments" within the Great Bay watershed. Further, EPA agrees that TSS is one such factor that has the potential to impact eelgrass recovery due to reduced water clarity. Finally, EPA agrees with the goal of "NO INCREASING TRENDS FOR TOTAL SUSPENDED SOLIDS" as noted in PREP's 2018 *State of Our Estuaries* report.

EPA notes that PREP's analysis considered the overall TSS load from all sources throughout the watershed, including both WWTFs and stormwater sources. Therefore, any approach to regulate TSS to prevent an "increasing trend" must likewise consider all sources. EPA has addressed this goal in two aspects, discussed below.

First, EPA expects that the efforts under the Great Bay Total Nitrogen General Permit (GBTN GP) permitting strategy will result in an overall decrease in TSS and other constituents found in stormwater. Specifically, the Response to Comments at 105 for the GBTN GP says the following:

> "Another question raised in the comments was whether EPA can describe other advantages of managing nonpoint source pollution in addition to nitrogen removal. Specifically, some commenters requested examples of measures that may have additional benefits such as aesthetics, total suspended solids (TSS) removal, erosion control, etc. Further, some commenters questioned whether implementing BMPs that are designed to maximize nitrogen reduction would result in less potential for TSS or chromophoric dissolved organic matter

[14] In light of the Pease WWTF's significant expansion in capacity from an average monthly flow of 0.513 MGD - 0.996 MGD, to a future design flow of 1.77 MGD, the draft permit's TBELs for TSS will likely result in an increase in TSS as compared to past, actual TSS loads. For example, as the Fact Sheet states, the median TSS removal percentage at the Pease WWTF has been 98%. By simply carrying forward the TSS TBELs established in the 2000 permit, including the "$\geq$ 85%" average monthly limitation for TSS, the permit could result in significantly more TSS being discharged as compared to past, actual loads.

(CDOM) reduction. There are many reasons a municipality may choose to implement BMPs throughout their jurisdiction, these reasons include stormwater system resiliency, flood mitigation, reduction of heat island effects, aesthetics, public safety and permitted pollutant reductions. The specific reason a municipality may choose one BMP over another, say tree planting over rain gardens, is a municipal decision based on local priorities. The pollution removal estimation tools provided by EPA Region 1 on https://www.epa.gov/npdes-permits/stormwater-tools-new-england#swbmp include information on nitrogen, phosphorus, TSS, metals and bacteria reduction based on the implementation of a variety of BMPs. This allows municipalities to use the best available information to define the pollution reduction realized by implementing different stormwater BMPs. Different BMP designs will optimize the reduction of one pollutant over another, but the agencies disagree that by prioritizing the removal of nitrogen in stormwater BMPs you would increase TSS or CDOM. Many BMPs rely on infiltration as a mechanism for pollution reduction, this will decrease the total volume of untreated stormwater reaching Great Bay and will reduce the overall loading of all constituents found in stormwater."

Second, EPA is holding the load for TSS from the WWTFs, even when such WWTFs have a flow increase such as Pease and Portsmouth. This is in accordance with antidegradation which prevents any load increase to an impaired water as was supported by the NHDES antidegradation letter dated March 4, 2020. See Response 4. The language regarding "*no more than an insignificant degradation of water quality"* from the Pease Fact Sheet at 15 (quoted in the comment) refers to this antidegradation requirement. EPA acknowledges that the Pease WWTF's actual load has been well below their current permit limit and therefore the actual load could increase even though EPA is retaining the load limits in the reissued permit. However, given that the requirement to "hold the load" for total nitrogen in the GBTN GP is based on the actual TN load[15], EPA does not expect that the Permittee can comply with this TN permit limit while increasing the TSS load significantly. Rather, EPA expects that the TSS load will not significantly increase and will more likely decrease from TSS loads seen prior to implementation of the GBTN GP.

Therefore, EPA asserts the following with respect to the overall TSS load to Great Bay:

- efforts by the municipalities under the GBTN GP (including Portsmouth) will result in significant decrease in TSS from stormwater sources;
- the TSS limits in the reissued Pease WWTF permit along with the TN limit for Pease in the GBTN GP will not result in a significant increase in TSS from Pease; and
- in sum, the overall TSS load to Great Bay is expected to decrease based on the GBTN GP and the Pease individual permit reissuance.

[15] EPA acknowledges that the TN limit for the Pease and Peirce Island WWTFs are linked, capping the total load from the two WWTFs well below the historic combined load. This fact does not negate EPA's position that the actual TSS load is unlikely to increase from Pease. Rather, EPA expects that this combined TN limit will prevent the actual TSS load from increasing significantly from both the Pease and Peirce Island WWTFs.

Therefore, EPA considers that the Pease permit is in accordance with State water quality standards and this comment does not result in any change to the Final Permit.

**Comment 46**

**The Final Permit Should Require Testing of More PFAS Chemicals**

CLF shares EPA's concern about the problem of PFAS pollution and strongly supports monitoring for the presence of PFAS in WWTF influent, effluent, and sludge. However, in light of the thousands of PFAS that now exist, the draft permit's requirement for only two PFAS (PFOS and PFOA) to be tested in the Pease WWTF's effluent, and only four PFAS (PFOS, PFOA, PFHxS, and PFNA) to be tested in its influent and sludge, is inadequate.

EPA's Draft Method 1633 enables testing for 40 PFAS compounds. On its website, EPA describes Draft Method 1633 as follows:

> EPA's Office of Water, in partnership with the Department of Defense's (DoD) Strategic Environmental Research and Development Program, has published draft Method 1633, a single-laboratory validated method to test for 40 PFAS compounds in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. This draft method can be used in various applications, **including National Pollutant Discharge Elimination System (NPDES) permits**. The method will support NPDES implementation by providing a consistent PFAS method that has been tested in a wide variety of wastewaters and contains all the required quality control procedures for the CWA. While the method is not nationally required for CWA compliance monitoring until EPA has promulgated it through rulemaking, **it is recommended now for use in individual permits.**
>
> Historically, EPA published draft methods on this Clean Water Act Methods website after completing the single-laboratory validation report. However, due to many public and stakeholder requests, this method was made available while DoD and EPA prepared the single-laboratory validation study report. The report is now available below.
>
> Multiple EPA programs have reviewed this draft method. DoD has begun a multi-laboratory validation study of the procedure, which is expected to be completed in 2022. DoD's multi-laboratory validation is proceeding in collaboration with the Office of Water, the Office of Land and Emergency Management, and the Office of Research and Development.
>
> The Office of Water will use the results of the multi-laboratory validation study to finalize the method and add formal performance criteria. The method validation process may eliminate some of the parameters listed in this draft method.
>
> In the meantime, the Office of Water encourages laboratories, regulatory authorities, and other interested parties to review **and use** the draft method, with the understanding that it is subject to revision.

*See* https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas (last visited May 16, 2022) (emphases added).

CLF urges EPA, in finalizing the permit, to require testing for PFAS in the Pease WWTF's effluent, influent, and sludge using its Draft Method 1633, including testing for the broader suite of PFAS compounds facilitated by that Method.

**Response 46**

EPA acknowledges that the Method 1633 is currently "draft" but expects the multi-lab validated method to be published by the end of 2022. As PFAS contamination is an urgent public health and environmental issue, EPA agrees with the comment that the Final Permit should require all 40 PFAS analytes measured by this method to be monitored and reported each quarter for influent, effluent and sludge. This level of monitoring is recommended in EPA's *October 2021 PFAS Strategic Roadmap*[16] and in an EPA memo dated April 28, 2022 called *Addressing PFAS Discharges in EPA-Issued NPDES Permits and Expectations Where EPA is the Pretreatment Control Authority*[17].

Table I.A.1., Effluent Characteristics, Influent Characteristics, and Sludge Characteristics has been modified in the Final Permit to now include monitoring for all 40 of the PFAS Analytes required to be tested in Method 1633. This analysis is to be conducted using Draft Method 1633 until there is an analytical method approved in 40 CFR Part 136. A list of the PFAS analytes that are required to be tested is provided in Attachment D to the Final Permit. Part I.F.6 regarding PFAS monitoring for industrial users has also been updated to reference Attachment D. EPA notes that the addition of these analytes does not entail a significant cost or burden on the Permittee given that the analytical method would measure these compounds in any case and the permit simply requires that they all be reported individually into NetDMR each quarter.

This reporting requirement for the listed PFAS parameters will go into effect the first full calendar quarter following 6 months after EPA notifies the permittee that EPA multi-lab validated methods for wastewater and for sludge are available.

[16] https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf
[17] https://www.epa.gov/system/files/documents/2022-04/npdes_pfas-memo.pdf

NEW HAMPSHIRE DEPARTMENT OF
ENVIRONMENTAL SERVICES
WATER DIVISION
P.O. BOX 95
CONCORD, NEW HAMPSHIRE 03302-0095

U.S. ENVIRONMENTAL PROTECTION
AGENCY-REGION 1
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

JOINT **EXTENSION OF PUBLIC COMMENT PERIOD** PERTAINING TO THE ISSUANCE OF A **DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT** TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTIONS 301 AND 402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT, AND ISSUANCE OF A STATE SURFACE WATER PERMIT UNDER NH RSA 485-A:13, I(a).

PUBLIC NOTICE PERIOD: **March 31, 2022 - May 16, 2022**

PERMIT NUMBER: **NH0109000***

NAME AND MAILING ADDRESS OF APPLICANT:

**City of Portsmouth**
**680 Peverly Hill Road**
**Portsmouth, NH 03801**

NAME AND LOCATION OF FACILITY WHERE DISCHARGE OCCURS:

**Pease Wastewater Treatment Facility**
**135 Corporate Drive**
**Portsmouth, NH 03801**

RECEIVING WATER: **Piscataqua River - Class B**

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) have cooperated in the development of a draft permit for the City of Portsmouth, which discharges sanitary and industrial wastewater. The effluent limits and permit conditions imposed have been drafted to assure compliance with the Clean Water Act, 33 U.S.C. sections 1251 et seq., Chapter 485-A of the New Hampshire Statutes: Water Pollution and Waste Disposal, and the New Hampshire Surface Water Quality Regulations, Env-Wq 1700 et seq. EPA has formally requested that the State certify the draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

* This public notice extension corrects a typographical error in the original public notice and draft permit documents in which the NPDES Permit Number was incorrectly identified as NH0090000. The correct NPDES Permit Number is NH0109000.

INFORMATION ABOUT THE DRAFT PERMIT:

The draft permit and explanatory fact sheet may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_nh.html or by contacting:

**Meridith Finegan**
**U.S. Environmental Protection Agency – Region 1**
**5 Post Office Square, Suite 100 (06-1)**
**Boston, MA 02109-3912**
**Telephone: (617) 918-1533**
**Email: finegan.meridith@epa.gov**

The administrative record containing all documents relating to this draft permit including all data submitted by the applicant may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

**EXTENSION OF PUBLIC COMMENT PERIOD**:

All persons, including applicants, who believe any condition of the draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by midnight ***May 16, 2022***, to the address or email address listed above. Any person, prior to such date, may submit a request in writing to EPA and NHDES for a public hearing to consider this draft permit. 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 whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office.

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 forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

KEN MORAFF, DIRECTOR
WATER DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 1

RENE PELLETIER, DIRECTOR
WATER DIVISION
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

# 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 Portsmouth, New Hampshire**

is authorized to discharge from the facility located at

**Pease Wastewater Treatment Facility**
**135 Corporate Drive**
**Portsmouth, NH 03801**

to receiving water named

**Piscataqua River, (USGS Hydrologic Unit Code: 01060003)**
**Piscataqua-Salmon Falls River Basin**

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 August 8, 2000.

This permit consists of **Part I** including the cover page(s), **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012), **Attachment B** (Pretreatment Program Development and Approval Standard Requirements), **Attachment C** (Industrial Pretreatment Program Annual Report), and **Part II (**NPDES Part II Standard Conditions, April 2018).

Signed this day of

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

[1]Pursuant to 40 Code of Federal Regulations (CFR) § 124.15(b)(3), if no comments requesting a change to the Draft Permit are received, the permit will become effective upon the date of signature.

**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 005 to Piscataqua 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] | 1.2 MGD[5] | --- | --- | Continuous | Recorder |
| Rolling Average Effluent Flow[5] | 1.77 MGD[5] | --- | --- | Continuous | Recorder |
| Effluent Flow[5] | Report MGD | --- | Report MGD | Continuous | Recorder |
| $BOD_5$ | 30 mg/L<br>300 lb/day | 45 mg/L<br>450 lb/day | 50 mg/L<br>500 lb/day | 2/Week | Composite |
| $BOD_5$ Removal | ≥ 85 % | --- | --- | --- | Calculation |
| TSS | 30 mg/L<br>300 lb/day | 45 mg/L<br>450 lb/day | 50 mg/L<br>500 lb/day | 2/Week | Composite |
| TSS Removal | ≥ 85 % | --- | --- | --- | Calculation |
| pH Range[6] | 6.5 - 8.0 S.U. | | | 1/Day | Grab |
| Total Residual Chlorine[7,8] | 0.75 mg/L | --- | 1.0 mg/L | 2/Day | Grab |
| *Enterococci* [7,8] | 35/100 mL | --- | 104/100 mL | 1/Day | Grab |
| Fecal Coliform[7,8] | 14/100 mL | --- | Report/100 mL | 1/Day | Grab |
| Fecal Coliform[7,8,9]<br>(% of samples > 28/100 mL) | --- | --- | ≤ 10 % | 1/Day | Grab |
| Total Cyanide | --- | --- | Report µg/L | 1/Quarter | Composite |
| Total Arsenic[10] | 0.22 lb/day<br>Report µg/L | --- | Report µg/L | 2/Month | Composite |
| Inorganic Arsenic[10] | --- | --- | Report µg/L | 2/Year | Composite |
| Perfluorohexanesulfonic acid (PFHxS)[11] | --- | --- | Report ng/L | 1/Quarter | Composite |
| Perfluorononanoic acid (PFNA)[11] | --- | --- | Report ng/L | 1/Quarter | Composite |

| Effluent Characteristic | Effluent Limitation | | | Monitoring Requirements[1,2,3] | |
|---|---|---|---|---|---|
| | Average Monthly | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type[4] |
| Perfluorooctanesulfonic acid (PFOS)[11] | --- | --- | Report ng/L | 1/Quarter | Composite |
| Perfluorooctanoic acid (PFOA)[11] | --- | --- | Report ng/L | 1/Quarter | Composite |

| Whole Effluent Toxicity (WET) Testing[12,13] | Reporting Requirements | | | Monitoring Requirements[1,2,3] | |
|---|---|---|---|---|---|
| | Average Monthly | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type[4] |
| $LC_{50}$ | --- | --- | ≥ 50 % | 1/Quarter | Composite |
| Ammonia Nitrogen | --- | --- | 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[14] | Reporting Requirements | | | Monitoring Requirements[1,2,3] | |
|---|---|---|---|---|---|
| | Average Monthly | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type[4] |
| Total Suspended Solids | --- | --- | Report mg/L | 1/Quarter | Grab |
| Ammonia Nitrogen | --- | --- | Report mg/L | 1/Quarter | Grab |
| Salinity | --- | --- | Report ppt | 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 |
| pH[15] | --- | --- | Report S.U. | 1/Quarter | Grab |
| Temperature[15] | --- | --- | Report °C | 1/Quarter | Grab |

| Ambient Characteristic[14] | Reporting Requirements | | | Monitoring Requirements[1,2,3] | |
|---|---|---|---|---|---|
| | Average Monthly | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type[4] |
| Total Arsenic[10] | --- | --- | Report µg/L | 2/Year | Composite |
| Inorganic Arsenic[10] | --- | --- | Report µg/L | 2/Year | Composite |

| 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 |
| Perfluorohexanesulfonic acid (PFHxS)[13] | --- | --- | Report ng/L | 1/Quarter | Composite |
| Perfluorononanoic acid (PFNA)[13] | --- | --- | Report ng/L | 1/Quarter | Composite |
| Perfluorooctanesulfonic acid (PFOS)[13] | --- | --- | Report ng/L | 1/Quarter | Composite |
| Perfluorooctanoic acid (PFOA)[13] | --- | --- | Report ng/L | 1/Quarter | Composite |

| Sludge Characteristic | Reporting Requirements | | | Monitoring Requirements[1,2,3] | |
|---|---|---|---|---|---|
| | Average Monthly | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type[4] |
| Perfluorohexanesulfonic acid (PFHxS)[16] | --- | --- | Report ng/g | 1/Quarter | Composite[17] |
| Perfluorononanoic acid (PFNA)[16] | --- | --- | Report ng/g | 1/Quarter | Composite[17] |
| Perfluorooctanesulfonic acid (PFOS)[16] | --- | --- | Report ng/g | 1/Quarter | Composite[17] |
| Perfluorooctanoic acid (PFOA)[16] | --- | --- | Report ng/g | 1/Quarter | Composite[17] |

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 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 to either 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 several 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.

   The rolling average flow limit of 1.2 MGD shall remain in effect until completion of facility expansion, whereupon the rolling average flow limit of 1.77 MGD shall go into

effect. See Part I.H.1., I.I.5., and I.I.7., below regarding notification of completion of facility expansion.

Until the facility expansion is complete, the Permittee shall report the No Discharge Indicator Code (NODI) of "9" (conditional not needed) on the monthly DMRs for the flow limit of 1.77 MGD. Upon completion of the facility expansion, the Permittee shall report the No Discharge Indicator Code (NODI) of "9" for the flow limit of 1.2 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.). See Part I.H.2 below for a provision to modify the pH range.

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.

   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 and in accordance with any more frequent reporting requirements in Part II Standard Conditions. 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 *Enterococci* and Fecal Coliform is expressed as a geometric mean. *Enterococci* and Fecal Coliform monitoring shall be conducted concurrently with TRC monitoring, if TRC monitoring is required.

9. The Daily Maximum limit is expressed as not more than 10% of the collected samples (over a monthly period) shall exceed a Most Probable Number (MPN) of 28 per 100 mL. Each month the percentage of collected samples that exceed an MPN of 28 per 100 mL shall be reported as the Daily Maximum value. Furthermore, all Fecal Coliform data collected must be submitted with the monthly Discharge Monitoring Reports (DMRs).

   See Part I.J.9 below for additional fecal coliform State 401 Certification Conditions.

10. See Part I.H.3 below for special condition related to arsenic optimization.

    Total arsenic and inorganic arsenic monitoring of the effluent and ambient shall be conducted twice per year on the same day as the Whole Effluent Toxicity testing in the calendar quarters ending June 30$^{th}$ and September 30$^{th}$. Total arsenic shall be measured using EPA Method 200.8. Inorganic arsenic shall be measured using EPA Method 1632.

11. Report in nanograms per liter (ng/L). This reporting requirement for the listed PFAS parameters takes effect the first full calendar quarter following 6 months after EPA notifies the permittee that an EPA multi-lab validated method for wastewater is available.

12. The Permittee shall conduct acute toxicity tests ($LC_{50}$) in accordance with test procedures and protocols specified in **Attachment A** of this permit. $LC_{50}$ is defined in Part II.E. of this permit. The Permittee shall test the inland silverside minnow, *Menidia beryllina*, and the mysid shrimp, *Mysidopsis bahia*. Toxicity test samples shall be collected and tests completed 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.

13. 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.

14. 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 during outgoing tide 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.

15. 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.

16. Report in nanograms per gram (ng/g). This reporting requirement for the listed PFAS parameters takes effect the first full calendar quarter following 6 months after EPA notifies the permittee that an EPA multi-lab validated method for sludge is available.

17. 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.

**Part I.A., continued.**

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

3. The discharge shall be free from substances in kind or quantity that settle to form harmful benthic deposits; float as foam, debris, scum or other visible substances; produce odor, color, taste or turbidity that is not naturally occurring and would render the surface water unsuitable for its designated uses; result in the dominance of nuisance species; or interfere with recreational activities.

4. Tainting substances shall not be present in the discharge in concentrations that individually or in combination are detectable by taste and odor tests performed on the edible portions of aquatic organisms.

5. The discharge shall not result in toxic substances or chemical constituents in concentrations or combinations in the receiving water that injure or are inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife that might consume aquatic life.

6. The discharge shall not result in benthic deposits that have a detrimental impact on the benthic community. The discharge shall not result in oil and grease, color, slicks, odors, or surface floating solids that would impair any existing or designated uses in the receiving water.

7. The discharge shall not result in an exceedance of the naturally occurring turbidity in the receiving water by more than 10 NTUs.

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. In accordance with 40 CFR § 122.44(j)(1), the Permittee must identify, in terms of character and volume of pollutants contributed from 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.

10. 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.

## B. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall listed in Part I.A.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.(1) (24-hour reporting). See Part I.I below for reporting requirements.

2. The Permittee must provide notification to the public within 24 hours of becoming aware of any unauthorized discharge, except SSOs that do not impact a surface water or the public, on a publicly available website, and it shall remain on the website for a minimum of 12 months. Such notification shall include the location (including latitude and longitude) and description of the discharge; estimated volume; 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.

## C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance (O&M) of the sewer system shall be in compliance with the Standard Conditions of Part II and the following terms and conditions. The Permittee shall complete the following activities for the collection system which it owns:

1. 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 Collection System O&M Plan required pursuant to Section C.5. below.

2. 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 Collection System O&M Plan required pursuant to Section C.5. below.

3. Infiltration/Inflow

The Permittee a 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 Collection System O&M Plan required pursuant to Section C.5. below.

4. Collection System Mapping

Within 30 months of the effective date of this permit, the Permittee shall prepare a map of the sewer collection system it owns. The map shall be on a street map of the community, with sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up-to-date and available for review by federal, state, or local agencies. Such map(s) shall include, but not be limited to the following:

a. All sanitary sewer lines and related manholes;

b. All combined sewer lines, related manholes, and catch basins;

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

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

e. All pump stations and force mains;

f. The wastewater treatment facility(ies);

g. All surface waters (labeled);

h. Other major appurtenances such as inverted siphons and air release valves;

i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;

j. The scale and a north arrow; and

k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

5. Collection System O&M Plan

The Permittee shall develop and implement a Collection System O&M Plan.

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

(1) A description of the collection system management goals, staffing, information management, and legal authorities;

(2) 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

(3) A schedule for the development and implementation of the full Collection System O&M Plan including the elements in paragraphs b.1. through b.8. below.

b. The full Collection 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:

(1) The required submittal from paragraph 5.a. above, updated to reflect current information;

(2) A preventive maintenance and monitoring program for the collection system;

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

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

(5) 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;

(6) 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;

(7) An educational public outreach program for all aspects of I/I control, particularly private inflow; and

(8) An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the

permit.

6. Annual Reporting Requirement

   The Permittee shall submit a summary report of activities related to the implementation of its Collection System O&M Plan 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 collection system O&M Plan required by Part I.C.5.b. 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; and

## 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. PRETREATMENT PROGRAM DEVELOPMENT

Within 270 days of the effective date of the permit, the Permittee shall submit a completed pretreatment program to the Director for approval. The proposed pretreatment program must satisfy the requirements of 40 CFR Section 403.8 and the Permittee's request for approval must conform to the requirements of 40 CFR Section 403.9. Additionally, the submittal should be consistent with **Attachment B** (Pretreatment Program Development and Approval Standard Requirements)

1. A pretreatment program submitted for approval shall contain the following:

   a. Development of 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 270 days of the effective date of this permit, the permittee shall prepare and submit a written technical Local Limit report to the EPA. As part of this report, 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. The Permittee shall carry out the Local Limits report in accordance with EPA's Local Limit Development Guidance (July 2004).

b. An evaluation by the City Solicitor, or a public official acting in a comparable capacity, of the legal authority of the permittee to apply and enforce the requirements of Sections 307(b), 307(c) and 402(b)(8) of the Clean Water Act. In accordance with 40 CFR Section 403.8(f)(1), this evaluation shall specifically address the Permittee's authority to:

(1) Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants to the POTW by industrial users;

(2) Require compliance with applicable pretreatment standards and requirements by industrial users;

(3) Control, through permit, contract, order, or similar means, the contribution to the POTW by each industrial user to ensure compliance with applicable pretreatment standards and requirements;

(4) Require (A) the development of a compliance schedule by each industrial user for the installation of facilities 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 40 CFR Section 403.12;

(5) 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. Representatives of the POTW shall be authorized to enter any premises of any industrial user in which an effluent source or treatment system is located or in which records are required to be kept under 40 CFR Section 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 Clean Water Act; and

(6) Obtain remedies including injunctive relief (such as discharge termination) and assessment of penalties for non-compliances with any pretreatment standard or requirement or for violation of any of the program requirements set forth in

subparagraphs (1) through (5) above.

c. Where the City Solicitor or comparable public official finds that the Permittee does not have the authority outlined above, the Permittee shall identify what additional authority is needed and submit a plan and schedule for obtaining it by the program submittal date;

2. The pretreatment program submitted for approval shall contain the following:

   a. An evaluation of staffing needs and funding to implement its pretreatment program. An estimate of personnel needed to 1) establish and track schedules of compliance, 2) receive and analyze monitoring reports, 3) conduct independent sampling and analysis as necessary, 4) investigate instances of non-compliance, 5) take enforcement actions, and 6) comply with the public participation requirement of 40 CFR Section 403.8(f)(2)(viii), shall be included. The discussion of funding shall include a description of the sources of funding and an estimate of the program costs;

   b. A discussion of its pretreatment strategy for all of the industries identified. The permittee shall identify the manner in which it will implement the program requirements set forth in 40 CFR Section 403.8, including the means by which pretreatment standards will be applied to individual users (e.g., by Order, Permit, Ordinance, Contract, etc.). This discussion shall include an enforcement response plan to assure industry compliance with local pretreatment requirements, federal prohibited discharge standards, federal categorical pretreatment standards, and the industrial reporting requirements of 40 CFR Sections 403.12(b)-(h);

   c. The design of a monitoring program which will implement the requirements of 40 CFR Sections 403.8 and 403.12, and in particular those requirements referenced in 40 CFR Sections 403.8(f)(1)(iv-v), 403.8(f)(2)(iv-vii), and 403.12(g-j);

   d. A list of additional monitoring equipment required by the POTW to implement the pretreatment program and, a description of municipal facilities to be constructed, if any, for monitoring or analysis of industrial wastes; and

   e. Specific POTW effluent limitations (local limits) for pollutants introduced into the POTW by industrial users which may pass through the POTW of interfere with the operation of performance of the works as required by 40 CFR Section 403.5(c) and 403.8(f)(iii)(B)(3).

3. The Permittee's complete pretreatment program is subject to revisions by EPA during the term of this permit and prior to renewing this permit under Section 301(h) of the Clean Water Act.

## F. INDUSTRIAL USERS AND PRETREATMENT PROGRAM

1. Upon approval by EPA, the Permittee shall implement the approved Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved Pretreatment Program, and the General Pretreatment Regulations, 40 CFR Part 403. At a minimum, the Permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):

    a. Carry out inspection, surveillance, and monitoring procedures 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.

    b. Issue or renew all necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.

    c. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment standard and/or requirement.

    d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

2. The Permittee shall provide EPA and the State 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 § 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 no later than **March 1** of each year.

3. The Permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR § 403.18(c).

4. The Permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal Regulations at 40 CFR § 405 et seq.

5. The Permittee must modify its pretreatment program, if necessary, to conform to all changes in the Federal Regulations that pertain to the implementation and enforcement of the industrial pretreatment program. The Permittee must provide EPA, in writing, within 180 days of this permit's effective date proposed changes, if applicable, to the Permittee's pretreatment program deemed necessary to assure conformity with current Federal Regulations. At a minimum, the Permittee must address in its written submission the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The Permittee will implement these proposed changes pending EPA Region1's approval under 40 CFR § 403.18. This submission is separate and distinct from any local limits analysis submission described in Part I.E.1.

6. Beginning the first full calendar quarter following 6 months after EPA has notified the Permittee that a multi-lab validated method for wastewater is available, 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 (i.e. bearings)
    - Landfill Leachate
    - Centralized Waste Treaters
    - Contaminated Sites
    - Fire Fighting Training Facilities
    - Airports
    - Any Other Known or Expected Sources of PFAS

    Sampling shall be for the following PFAS chemicals:

| Industrial User Effluent Characteristic | Maximum Daily | Monitoring Requirements | |
|---|---|---|---|
| | | Frequency | Sample Type |
| Perfluorohexanesulfonic acid (PFHxS) | Report ng/L | 1/year | Composite |
| Perfluorononanoic acid (PFNA) | Report ng/L | 1/year | Composite |
| Perfluorooctanesulfonic acid (PFOS) | Report ng/L | 1/year | Composite |
| Perfluorooctanoic acid (PFOA) | Report ng/L | 1/year | Composite |

    The industrial discharges sampled, and the sampling results shall be summarized and included in the annual report (see Part I.F.2).

## G. 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).

9. Compliance with the requirements of this permit or 40 CFR Part 503 shall not eliminate or modify the need to comply with applicable requirements under RSA 485-A and Env-Wq 800, New Hampshire Sludge Management Rules.

## H. SPECIAL CONDITIONS

1. Completion of Facility Expansion and Startup

   The Permittee shall submit to EPA and NHDES a letter certifying the completion and startup of all facility expansion projects. This letter shall be submitted in accordance with Part I.I.5. and Part I.I.7. of this Permit.

2. Provision to Modify pH Range

   The pH range may be modified if the Permittee satisfies conditions set forth in Part I.J.4 below. Upon notification of an approval by NHDES, EPA will review and, if acceptable, will submit written notice to the Permittee of the permit change. The modified pH range will not be in effect until the Permittee receives written notice from EPA.

3. Arsenic Optimization

   Within 12 months from the effective date of the permit, the Permittee shall evaluate all potentially significant sources of arsenic in the collection system and provide alternatives for minimizing these sources. Beginning 12 months from the effective date of the permit, the Permittee shall implement the alternatives for minimizing arsenic sources found in its evaluation and summarize the actions taken in an annual report due every March 15 for the previous calendar year.

## 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. This includes the NHDES Monthly Operating Reports (MORs). 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.

      (5) Letter certifying completion of facility expansion.

   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

   Unless otherwise specified in this permit or by the State, duplicate signed copies of all reports, information, requests or notifications described in this permit, including the reports, information, requests or notifications described in Parts I.I.3 through I.I.6 shall also be submitted to the New Hampshire Department of Environmental Services, Water Division (NHDES–WD) electronically to the Permittee's assigned NPDES inspector at NHDES-WD or as a hardcopy to the following addresses:

   New Hampshire Department of Environmental Services
   Water Division
   Wastewater Engineering Bureau
   29 Hazen Drive, P.O. Box 95

Concord, New Hampshire 03302-0095

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
NHDES Assigned NPDES Inspector at 603-271-1493

## J. STATE 401 CERTIFICATION CONDITIONS

1. The Permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification of, or interfere with the uses assigned to, said water by the New Hampshire Legislature (RSA 485-A:12).

2. This NPDES discharge permit is issued by EPA under federal law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a state permit pursuant to RSA 485-A:13.

3. EPA shall have the right to enforce the terms and conditions of this permit pursuant to federal law and NHDES-WD shall have the right to enforce the permit pursuant to state law, if the permit is adopted. Any modification, suspension, or revocation of this permit shall be effective only with respect to the agency taking such action and shall not affect the validity or status of the permit as issued by the other agency.

4. The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the Permittee can demonstrate to NHDES-WD: 1) that the range should be widened due to naturally occurring conditions in the receiving water; or 2) that the naturally occurring receiving water pH is not significantly altered by the Permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR § 133.102(c).

5. Pursuant to New Hampshire Code of Administrative Rules, Env-Wq 703.07(a):

   Any person proposing to construct or modify any of the following shall submit an application for a sewer connection permit to the department:

a. Any extension of a collector or interceptor, whether public or private, regardless of flow;

b. Any wastewater connection or other discharge in excess of 5,000 gpd;

c. Any wastewater connection or other discharge to a WWTP operating in excess of 80 percent design flow capacity or design loading capacity based on actual average flow or loading for 3 consecutive months;

d. Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity;

e. Any sewage pumping station greater than 50 gpm or serving more than one building; or

f. Any proposed sewer that serves more than one building or that requires a manhole at the connection.

6. Pursuant to Env-Wq 305.21, at a frequency no less than every five years, the Permittee shall submit to NHDES:

   a. A copy of its current sewer use ordinance if it has been revised without department approval subsequent to any previous submittal to the department or a certification that no changes have been made.

   b. A current list of all significant indirect dischargers to the POTW. At a minimum, the list shall include for each significant indirect discharger, its name and address, the name and daytime telephone number of a contact person, products manufactured, industrial processes used, existing pretreatment processes, and discharge permit status.

   c. A list of all permitted indirect dischargers; and

   d. A certification that the municipality is strictly enforcing its sewer use ordinance and all discharge permits it has issued.

7. When the effluent discharged for a period of three (3) consecutive months exceeds 80 percent of the 1.77 MGD design flow (1.42 MGD) or design loading capacity, the Permittee shall submit to the permitting authorities a projection of flows and loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the Permittee may be required to submit plans for facility improvements.

8. Outfall Diffuser Maintenance and Inspection

   a. The effluent diffuser shall be maintained as necessary to ensure proper operation.

Proper operation means that the plumes from each port will be balanced relative to each other and that they all have unobstructed flow. Maintenance may include dredging in the vicinity of the diffuser, clean out of solids in the diffuser header pipe, removal of debris and repair/replacement of riser ports and duckbill valves.

b. Any necessary maintenance dredging must be performed only after receiving all necessary permits from the NHDES Wetlands Bureau and other appropriate agencies.

c. To determine if maintenance will be required, the Permittee shall have a licensed diver or licensed marine contractor inspect and videotape the operation of the diffuser. The inspections and videotaping shall be performed in accordance with the following schedule:

(1) Every year if no duckbill valves have been installed on the riser ports; or

(2) Every 2 years if duckbill valves have been installed on the riser ports.

d. The video of the diffuser inspection and a copy of a report summarizing the results of the inspection shall be submitted to EPA and NHDES-WD on a USB drive within 60 days of each inspection. A schedule for cleaning, repairs, or other necessary maintenance shall be included in the report if the inspection indicates that it is necessary. Necessary cleaning, repairs, or other maintenance should be documented with a photo or video taken after the action is completed.

9. NHDES Shellfish Notification Procedures

The Permittee shall immediately notify the Shellfish Section of NHDES-WD of possible high bacteria/virus loading events from the facility or its sewage collection infrastructure. Such events include:

a. Any lapse or interruption of normal operation of the POTW disinfection system, or other event that results in discharge of sewage from the POTW or sewage collection infrastructure (pump stations, sewer lines, manholes, etc.) that has not undergone full disinfection as specified in this permit;

b. Total daily flows in excess of the POTW's rolling annual average flow limit; and

c. Daily post-disinfection effluent sample result of 43 fecal coliform/100 mL or greater. Notification shall also be made for instances where NPDES-required bacteria sampling is not completed, or where the results of such sampling are invalid.

Notification shall be made using the program's cell phone number. If Shellfish Program staff are not available to answer the phone, leave a message describing the issue or situation and provide your contact information, including phone number. Then, call the Shellfish Program’s pager and enter a call back number. Upon initial notification of a possible high bacteria/virus loading event,

Shellfish Program staff will determine the most suitable interval for continued notification and updates on an event-by-event basis.

NHDES - Shellfish Program
Cell Phone: 603-568-6741
Pager: 603-771-9826

# Attachment A

## MARINE 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:

- **2007.0 - Mysid Shrimp (Americamysis bahia) definitive 48 hour test.**
- **2006.0 - Inland Silverside (Menidia beryllina) definitive 48 hour test.**

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

## II. METHODS

The permittee shall use the most recent 40 CFR Part 136 methods. Whole Effluent Toxicity (WET) Test Methods and guidance may be found at:

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

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 and receiving water sample shall be collected. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any holding time extension. Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine[1] (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate

[1] For this protocol, total residual chlorine is synonymous with total residual oxidants.

prior to sample use for toxicity testing. If performed on site the results should be included on the chain of custody (COC) presented to WET laboratory.

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 mg/L chlorine. If dechlorination is necessary, a thiosulfate control consisting of the maximum concentration of thiosulfate used to dechlorinate the sample in the toxicity test control water must also be run in the WET test.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol. Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6$^{o}$ C.

## IV. DILUTION WATER

Samples of receiving water must be collected from a reasonably accessible location in the receiving water body immediately upstream of the permitted discharge's zone of influence. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2,Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water is found to be, or suspected to be toxic or unreliable, ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is

species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first case is when repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use by the permittee and toxicity testing laboratory. The second is when two of the most recent documented incidents of unacceptable site dilution water toxicity require ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

Manager
Water Technical Unit (SEW)
U.S. Environmental Protection Agency
Five Post Office Square, Suite 100
Mail Code 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/enforcementandassistance/dmr.html for further important details on alternate dilution water substitution requests.*

## V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA Region 1 requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Americamysis and Menidia toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE MYSID, AMERICAMYSIS BAHIA 48 HOUR TEST**[1]

| | |
|---|---|
| 1. Test type | 48hr Static, non-renewal |
| 2. Salinity | 25ppt ± 10 percent for all dilutions by adding dry ocean salts |
| 3. Temperature ($^{o}$C) | 20$^{o}$C ± 1$^{o}$C or 25$^{o}$C ± 1$^{o}$C, temperature must not deviate by more than 3$^{o}$C during test |
| 4. Light quality | Ambient laboratory illumination |
| 5. Photoperiod | 16 hour light, 8 hour dark |
| 6. Test chamber size | 250 ml (minimum) |
| 7. Test solution volume | 200 ml/replicate (minimum) |
| 8. Age of test organisms | 1-5 days, < 24 hours age range |
| 9. No. Mysids per test chamber | 10 |
| 10. No. of replicate test chambers per treatment | 4 |
| 11. Total no. Mysids per test concentration | 40 |
| 12. Feeding regime | Light feeding using concentrated Artemia naupli while holding prior to initiating the test |
| 13. Aeration [2] | None |
| 14. Dilution water | 5-30 ppt, +/- 10%; Natural seawater, or deionized water mixed with artificial sea salts |
| 15. Dilution factor | ≥ 0.5 |
| 16. Number of dilutions [3] | 5 plus a control. An additional dilution at the permitted effluent concentration (% |

| | |
|---|---|
| | effluent) is required if it is not included in the dilution series. |
| 17. Effect measured | Mortality - no movement of body appendages on gentle prodding |
| 18. Test acceptability | 90% or greater survival of test organisms in control solution |
| 19. Sampling requirements | For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection. |
| 20. Sample volume required | Minimum 1 liter for effluents and 2 liters for receiving waters |

Footnotes:

[1] Adapted from EPA 821-R-02-012.

[2] If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.

[3] When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

**EPA NEW ENGLAND TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST[1]**

| | |
|---|---|
| 1. Test Type | 48 hr Static, non-renewal |
| 2. Salinity | 25 ppt ± 10 % by adding dry ocean salts |
| 3. Temperature | 20°C ± 1°C or 25°C ± 1°C, temperature must not deviate by more than 3°C during test |
| 4. Light Quality | Ambient laboratory illumination |
| 5. Photoperiod | 16 hr light, 8 hr dark |
| 6. Size of test vessel | 250 mL (minimum) |
| 7. Volume of test solution | 200 mL/replicate (minimum) |
| 8. Age of fish | 9-14 days; 24 hr age range |
| 9. No. fish per chamber | 10 (not to exceed loading limits) |
| 10. No. of replicate test vessels per treatment | 4 |
| 11. Total no. organisms per concentration | 40 |
| 12. Feeding regime | Light feeding using concentrated Artemia nauplii while holding prior to initiating the test |
| 13. Aeration[2] | None |
| 14. Dilution water | 5-32 ppt, +/- 10% ; Natural seawater, or deionized water mixed with artificial sea salts. |
| 15. Dilution factor | ≥ 0.5 |
| 16. Number of dilutions[3] | 5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series. |
| 17. Effect measured | Mortality-no movement on gentle prodding. |

| | |
|---|---|
| 18. Test acceptability | 90% or greater survival of test organisms in control solution. |
| 19. Sampling requirements | For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection. |
| 20. Sample volume required | Minimum 1 liter for effluents and 2 liters for receiving waters. |

Footnotes:

[1] Adapted from EPA 821-R-02-012.

[2] If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.

[3] When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

V.1. Test Acceptability Criteria

If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.2. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

In general, if reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary as prescribed below.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.2.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥3 standard deviations for IC25s and LC50 values and ≥ two concentration intervals for NOECs or NOAECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

## VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

| Parameter | Effluent | Diluent | Minimum Level for effluent[*1] (mg/L) |
|---|---|---|---|
| pH | x | x | --- |
| Salinity | x | x | ppt(o/oo) |
| Total Residual Chlorine [*2] | x | x | 0.02 |
| Total Solids and Suspended Solids | x | 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 |

Superscript:

[*1] These are the minimum levels for effluent (fresh water) samples. Tests on diluents (marine waters) shall be conducted using the Part 136 methods that yield the lowest MLs.

[*2] Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

-Method 4500-Cl E  Low Level Amperometric Titration (the preferred method);
-Method 4500-CL G DPD Photometric Method.

## VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

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

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

No Observed Acute Effect Level (NOAEL)

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

## VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Toxicity Test summary sheet(s) (Attachment F to the DMR Instructions) which includes:
    - Facility name
    - NPDES permit number
    - Outfall number
    - Sample type
    - Sampling method
    - Effluent TRC concentration
    - Dilution water used
    - Receiving water name and sampling location
    - Test type and species
    - Test start date
    - Effluent concentrations tested (%) and permit limit concentration
    - Applicable reference toxicity test date and whether acceptable or not
    - Age, age range and source of test organisms used for testing
    - Results of TAC review for all applicable controls
    - Permit limit and toxicity test results
    - Summary of any test sensitivity and concentration response evaluation that was conducted

Please note: The NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) are available on EPA's website at http://www.epa.gov/NE/enforcementandassistance/dmr.html

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures;
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s);
- Reference toxicity test control charts;
- All sample chemical/physical data generated, including minimum levels (MLs) and analytical methods used;
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis;
- A discussion of any deviations from test conditions; and
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint.

## Attachment B

## Pretreatment Program Development and Approval Standard Requirements

Within 270 days of the effective date of the permit, the permittee shall submit to EPA an approved Industrial Pretreatment Program consistent with the requirements of 40 CFR 403.8(f). The Industrial Pretreatment Program submission shall consist of the following chapters:

**Chapter 1** - Organization and Multi-jurisdiction Implementation

This chapter would describe the overall program structure as well as contain descriptions of the treatment plants, collection systems, and the service area including political boundaries.

**Chapter 2** - Legal Authority

This chapter would contain a sewer use ordinance and all multi-jurisdictional agreements consistent with requirements of 40 CFR 403.8(f)(1). The sewer use ordinance shall be submitted as a final draft ready for adoption and implementation pending EPA approval.

**Chapter 3** - Local Limits

This chapter would contain the technical basis for the local limits. It will include the analyses necessary to determine the maximum headworks loadings for the wastewater treatment plant and the maximum pollutant levels protective of the collection system, as well as the method of allocating allowable loadings to the users, a schedule of public hearings and outreach, and the ordinance adoption procedures. (This chapter must contain a survey quantifying the zinc loading discharged to the treatment plant both from domestic and non-domestic sources, and an overall control strategy for minimizing zinc loadings into the wastewater treatment plants.) Local limitations can be numerical concentrations or loading limits but must be carried out in accordance with EPA's Local Limit Development Guidance (July 2004).

**Chapter 4** - Identification of Non-domestic Users

This chapter would contain the procedures used on-going updates to the Industrial Pretreatment Program. This chapter would also include the current inventory of industrial users, by non-domestic sewer connection, and of any zero-discharging categorical industrial users (if applicable) who comply with their Federal standards by not discharging process wastewaters.

The inventory must indicate the following for each industrial user and zero-discharging categorical industrial user:

1. Whether it qualifies as a significant industrial user;
2. The average and peak flow rates;
3. The SIC code;
4. The pretreatment-in-place, and;
5. The local permit status.

**Chapter 5** - Permits and Fact Sheets

This chapter would describe the permitting procedures and include a fact sheet and final draft permit for each significant industrial user to be issued upon approval of the local limits and revised ordinance by EPA. The fact sheets must indicate the following for each significant industrial user:

1. The industry name, address, owner or plant manager;
2. The permit expiration date (not to exceed five years in duration);
3. A description of the facility including the products made or services provided, building names, the process in each building, and when current operations began;
4. The identification of each sewer connection;
5. A description of the contributing waste streams that comprise each identified non-domestic discharge into the sewers;
6. The pretreatment-in-place for each identified non-domestic discharge to the sewers;
7. The classification by Federal point source category and the reasons justifying this classification;
8. The applicable Federal categorical pretreatment standards (adjusted if necessary to account for dilution), supporting production data (if necessary), and the compliance sampling point(s) where the standards apply;
9. The pollutants of concern and the compliance sampling point(s) where the local limits apply;
10. A site map indicating the locations of all compliance sampling point(s), sewer connections, and sewer laterals;
11. The sampling frequency by regulated pollutant for each compliance sampling point, and the supporting statistical rationale, to ensure that the sampling is representative of the wastewater discharge variability over the reporting period;
12. The sampling protocol by regulated pollutant for each compliance sampling point to ensure that the samples collected to determine compliance with Federal standards are representative of the sampling day's discharge.

**Chapter 6** - Compliance Monitoring

This chapter would describe the industrial user self-monitoring program and Northbridge's oversight monitoring program. The compliance monitoring program must ensure that all sampling is representative over the reporting period

and that each sample collected to determine compliance with Federal standards is representative of the sampling day's discharge. The compliance monitoring program must also set analytical detection limits that are sufficiently below Federal standards and local limits to allow the determination of non-compliance.

**Chapter 7** - Enforcement

This chapter would establish the enforcement response plan to be used to address, at a minimum, each of the following types of violations:

1. Isolated and chronic violations of permit effluent limits;
2. Violations of permit effluent limits that result in any adverse impacts upon the treatment works such as pass-through, interference, sludge contamination, sewer line degradation, explosive or inflammability risks, or worker health and safety risks;
3. Failure to self-monitor or report;
4. The bypassing of pretreatment necessary to comply with permit effluent limits;
5. Dilution as a substitute for treatment necessary to comply with Federal categorical pretreatment standards;
6. The bypassing of compliance sampling or the tampering with sampling equipment;
7. Willful or negligent violations.

**Chapter 8** - Resources

This chapter would cover the budget, staffing and equipment needs of the pretreatment program.

**Chapter 9** - Public Participation and Confidentiality

This chapter would describe the administrative procedures required under 40 CFR 403.8(f)(1)(vii) and 403.8(f)(2)(viii).

**Attachment C**
**Industrial Pretreatment Program Annual Report**

The Permittee shall provide the Approval Authority with an 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, and must include, at a minimum, the applicable required data in Appendix A to 40 CFR Part 127. The report required by this section must also include a summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority and any other relevant information requested by the Approval Authority. As of December 21, 2025 all annual reports submitted in compliance with this section must be submitted electronically by the POTW Pretreatment Program to the Approval Authority or initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR Part 3 (including, in all cases, Subpart D to Part 3), 40 CFR § 122.22, and 40 CFR Part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of Part 127, the Approval Authority 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 submit to Approval Authority and the State permitting authority a report that contains the following information requested by EPA:

1. An updated list of the POTW's Industrial Users by category as set forth in 40 CFR § 403.8(f)(2)(i), to include:
    a. Names and addresses, or a list of deletions and additions keyed to a previously submitted list. The POTW shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical Pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The POTW shall also list the Industrial Users that are subject only to local Requirements. The list must also identify Industrial Users subject to categorical Pretreatment Standards that are subject to reduced reporting requirements under paragraph (e)(3), and identify which Industrial Users are Non-Significant Categorical Industrial Users;
    b. Permit status - Whether each SIU has an unexpired control mechanism and an explanation as to why any SIUs are operating without a current, unexpired control mechanism (*e.g.*, permit);
    c. Baseline monitoring reporting requirements for newly promulgated industries;
    d. In addition, a brief description of the industry and general activities.

2. A summary of compliance and enforcement activities during the preceding year, including the number of:
    a. significant industrial users inspected by POTW (include inspection dates for each industrial user),

b. significant industrial users sampled by POTW (include sampling dates for each industrial user),
c. compliance schedules issued (include list of subject users),
d. written notices of violations issued (include list of subject users),
e. administrative orders issued (include list of subject users),
f. criminal or civil suits filed (include list of subject users) and,
g. penalties obtained (include list of subject users and penalty amounts).

3. 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.

4. The Permittee shall prepare annually a list of industrial users, which during the preceding twelve (12) months have significantly violated Pretreatment Standards or requirements 40 CFR § 403.8(f)(2)(vii). This list is to be published annually in a newspaper of general circulation in the Permittee's service area.

5. A summary of all monitoring activities performed within the previous twelve (12) months. The following information shall be reported:
   a. Total number of SIUs inspected;
   b. Total number of SIUs sampled; and
   c. For all industrial users that were in Significant Non-Compliance during the previous twelve (12) months, provide the name of the violating industrial user; indicate the nature of the violations, the type and number of actions taken (administrative order, criminal or civil suit, fines or penalties collected, etc.) and current compliance status. Indicate if the company returned to compliance and the date compliance was attained. Determination of Significant Non-Compliance shall be performed.

6. A summary of all enforcement actions not covered by the paragraph above conducted in accordance with the approved Enforcement Response Plan.
7. A description of actions being taken to reduce the incidence of significant violations by significant industrial users.
8. A detailed description of all interference and pass-through that occurred during the past year.
9. A thorough description of all investigations into interference and pass-through during the past year.
10. 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.
11. The Permittee shall analyze the treatment facility influent and effluent at least annually for the presence of the toxic pollutants listed in 40 CFR Part 122 Appendix D (NPDES Application Testing Requirements) Table III as follows:

    Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Zinc, Cyanide, and Phenols.
    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. All analytical procedures and method detection limits must be specified when reporting the results of such analyses.

12. The Permittee shall analyze the treatment facility sludge (biosolids) prior to disposal, for the presence of toxic pollutants listed above in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table III at least once per year. If the Permittee does not dispose of biosolids during the calendar year, the Permittee shall certify to that in the Pretreatment Annual Report and the monitoring requirements in this paragraph shall be suspended for that calendar year.

    The Permittee shall use sample collection and analysis procedures as approved for use under 40 CFR Part 503 or specified in the EPA Region 8 General Permit for biosolids.

13. The summary shall include an evaluation 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 paragraphs above or any similar sampling program described in this Permit.

14. Identification of the specific locations, if any, designated by the Permittee for receipt (discharge) of trucked or hauled waste, if modified.

15. Information as required by the Approval Authority or State permitting authority on the discharge to the POTW from the following activities:

    a. Groundwater clean-up from underground storage tanks;
    b. Trucked or hauled waste; and
    c. Groundwater clean-up from RCRA or Superfund sites.

16. A description of all changes made during the previous calendar year to the Permittee's pretreatment program that were not submitted as substantial or non-substantial modifications to EPA.

17. 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.

18. Results of all PFAS sampling conducted of industrial discharges in accordance with the Pretreatment Program requirements in Part I of the NPDES permit.

19. Any other information that may be deemed necessary by the Approval Authority.

# 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 | |
| $Cl_2$ | 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 |
| $NH_3$-N | Ammonia nitrogen as nitrogen |
| $NO_3$-N | Nitrate as nitrogen |
| $NO_2$-N | Nitrite as nitrogen |
| $NO_3$-$NO_2$ | 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 |

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**NEW ENGLAND - REGION 1**
**5 POST OFFICE SQUARE, SUITE 100**
**BOSTON, MASSACHUSETTS 02109-3912**

# FACT SHEET

## DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

**NPDES PERMIT NUMBER:** NH0090000

**PUBLIC NOTICE START AND END DATES:** March 31, 2022 – April 29, 2022

**NAME AND MAILING ADDRESS OF APPLICANT:**

City of Portsmouth
680 Peverly Hill Road
Portsmouth, NH 03801

**NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:**

Pease Wastewater Treatment Facility
135 Corporate Drive
Portsmouth, NH 03801

**RECEIVING WATER AND CLASSIFICATION:**

Piscataqua River, (USGS Hydrologic Unit Code: 01060003)
Piscataqua-Salmon Falls River Basin
Class B

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## 1.0 Proposed Action

The above-named applicant (the Permittee) has applied to the U.S. Environmental Protection Agency (EPA) for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge from the Pease Wastewater Treatment Plant (the Facility) into the designated receiving water.

The permit currently in effect was issued on August 8, 2000 with an effective date of September 6, 2000 and expired on August 8, 2005 (the "2000 Permit"). The Permittee filed an application for permit reissuance with EPA dated March 4, 2005, as required by 40 Code of Federal Regulations (CFR) § 122.6. Since the permit application was deemed timely and complete by EPA on July 7, 2005, the Facility's 2000 Permit has been administratively continued pursuant to 40 CFR § 122.6 and § 122.21(d). The Permittee submitted a revised application on June 21, 2019 to request a flow increase at the Facility intended to support planned growth at the Pease International Tradeport. The Draft Permit will be based on information in the revised application. EPA and the State conducted a site visit on March 11, 2020.

In addition to Outfall 005 (treated municipal wastewater), the 2000 Permit included monitoring requirements and effluent limits for Outfalls 001, 002, 003, and 004; which discharge stormwater from the Pease properties. The Draft Permit only authorizes discharges from Outfall 005. The authorization to discharge industrial stormwater associated with outfalls 001, 002, 003, and 004 (stormwater outfalls) will remain under the 2000 Permit until these discharges become authorized under either an individual permit or the Multi-sector General Permit.

This Permit is being reissued under permit number NH0109000.

The NPDES Permit is issued by EPA under federal law, New Hampshire construes Title L, Water Management and Protection, Chapters 485-A, Water Pollution and Waste Disposal, to authorize the New Hampshire Department of Environmental Services (NHDES) to "consider" a federal NPDES permit to be a State surface water discharge permit. As such, all the terms and conditions of the permit may, therefore, be incorporated into and constitute a discharge permit issued by NHDES.

## 2.0 Statutory and Regulatory Authority

Congress enacted the Federal Water Pollution Control Act, codified at 33 U.S.C. § 1251-1387 and commonly known as the Clean Water Act (CWA), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specific permitting sections of the CWA, one of which is § 402. *See* CWA §§ 301(a), 402(a). Section 402(a) established one of the CWA's principal permitting programs, the NPDES Permit Program. Under this section, EPA may "issue a permit for the discharge of any pollutant or combination of pollutants" in accordance with certain conditions. CWA § 402(a). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. *See* CWA § 402(a)(1)

and (2). The regulations governing EPA's NPDES permit program are generally found in 40 CFR §§ 122, 124, 125, and 136.

"Congress has vested in the Administrator [of EPA] broad discretion to establish conditions for NPDES permits" in order to achieve the statutory mandates of Section 301 and 402. *Arkansas v. Oklahoma,* 503 U.S. 91, 105 (1992). *See also* 40 CFR §§ 122.4(d), 122.44(d)(1), and 122.44(d)(5). CWA §§ 301 and 306 provide for two types of effluent limitations to be included in NPDES permits: "technology-based" effluent limitations (TBELs) and "water quality-based" effluent limitations (WQBELs). *See* CWA §§ 301, and 304(d); 40 CFR Parts 122, 125, 131.

## 2.1 Technology-Based Requirements

Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant reducing technology available and economically achievable for the type of facility being permitted. *See* CWA § 301(b). As a class, publicly owned treatment works (POTWs) must meet performance-based requirements based on available wastewater treatment technology. *See* CWA § 301(b)(1)(B). The performance level for POTWs is referred to as "secondary treatment." Secondary treatment is comprised of technology-based requirements expressed in terms of $BOD_5$, TSS and pH. *See* 40 CFR Part 133.

Under CWA § 301(b)(1), POTWs must have achieved effluent limits based upon secondary treatment technology by July 1, 1977. Since all statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired, when technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. *See* 40 CFR § 125.3(a)(1).

## 2.2 Water Quality Based Requirements

The CWA and federal regulations also require that permit effluent limits based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is necessary when less stringent TBELs would interfere with the attainment or maintenance of water quality criteria in the receiving water. *See* CWA § 301(b)(1)(C) and 40 CFR §§ 122.44(d)(1), 122.44(d)(5).

### 2.2.1 Water Quality Standards

The CWA requires that each state develop water quality standards (WQSs) for all water bodies within the State. *See* CWA § 303 and 40 CFR § 131.10-12. Generally, WQSs consist of three parts: 1) the designated use or uses assigned for a water body or a segment of a water body; 2) numeric or narrative water quality criteria sufficient to protect the assigned designated use(s); and 3) antidegradation requirements to ensure that once a use is attained it will not be degraded and to protect high quality and National resource waters. *See* CWA § 303(c)(2)(A) and 40 CFR § 131.12. The applicable State WQSs can be found in the New Hampshire Code of Administrative Rules, Surface Water Quality Standards, Chapter Env-Wq 1700, *et seq*. *See also*

*generally*, N.H. Rev. Stat. Title L, Water Management and Protection, Chapters 485-A, Water Pollution and Waste Disposal.

As a matter of state law, state WQSs specify different water body classifications, each of which is associated with certain designated uses and numeric and narrative water quality criteria. When using chemical-specific numeric criteria to develop permit limitations, acute and chronic aquatic life criteria and human health criteria are used and expressed in terms of maximum allowable in-stream pollutant concentrations. In general, aquatic-life acute criteria are considered applicable to daily time periods (maximum daily limit) and aquatic-life chronic criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific human health criteria are typically based on lifetime chronic exposure and, therefore, are typically applicable to average monthly limits.

When permit effluent limitation(s) are necessary to ensure that the receiving water meets narrative water quality criteria, the permitting authority must establish effluent limits in one of the following three ways: 1) based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use," 2) based on a "case-by-case basis" using CWA § 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, 3) in certain circumstances, based on use of an indicator parameter. *See* 40 CFR § 122.44(d)(1)(vi)(A-C).

### 2.2.2 Antidegradation

Federal regulations found at 40 CFR § 131.12 require states to develop and adopt a statewide antidegradation policy that maintains and protects existing in-stream water uses and the level of water quality necessary to protect these existing uses. In addition, the antidegradation policy ensures maintenance of high quality waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water, unless the State finds that allowing degradation is necessary to accommodate important economic or social development in the area in which the waters are located.

The New Hampshire Antidegradation Policy, found at Env-Wq 1708, applies to any new or increased activity that would lower water quality or affect existing or designated uses, including increased loadings to a water body from an existing activity. The antidegradation regulations focus on protecting high quality waters and maintaining water quality necessary to protect existing uses. Discharges that cause "significant degradation" are defined in NH WQS (Env-Wq 1708.09(a)) as those that use 20% or more of the remaining assimilative capacity for a water quality parameter in terms of either concentration or mass of pollutants or flow rate for water quantity. When NHDES determines that a proposed increase would cause a significant impact to existing water quality, the applicant must provide documentation to demonstrate that the lowering of water quality is necessary, that it will provide net economic or social benefit in the area in which the water body is located, and that the benefits of the activity outweigh the environmental impact caused by the reduction in water quality. *See* Env-Wq 1708.10(b).

New or increased discharges are authorized by this permit, and NHDES has conducted an

antidegradation review for this permit reissuance and has determined that the Draft Permit is being reissued with effluent limitations sufficiently stringent to satisfy the State's antidegradation requirements, including the protection of the existing uses of the receiving water.[1]

### 2.2.3 Assessment and Listing of Waters and Total Maximum Daily Loads.

The objective of the CWA is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. To meet this goal, the CWA requires states to develop information on the quality of their water resources and report this information to EPA, the U.S. Congress, and the public. To this end, EPA released guidance on November 19, 2001, for the preparation of an integrated "List of Waters" that could combine reporting elements of both § 305(b) and § 303(d) of the CWA. The integrated list format allows states to provide the status of all their assessed waters in one list. States choosing this option must list each water body or segment in one of the following five categories: 1) unimpaired and not threatened for all designated uses; 2) unimpaired waters for some uses and not assessed for others; 3) insufficient information to make assessments for any uses; 4) impaired or threatened for one or more uses but not requiring the calculation of a Total Maximum Daily Load (TMDL); and 5) impaired or threatened for one or more uses and requiring a TMDL.

A TMDL is a planning tool and potential starting point for restoration activities with the ultimate goal of attaining water quality standards. A TMDL essentially provides a pollution budget designed to restore the health of an impaired water body. A TMDL typically identifies the source(s) of the pollutant from point sources and non-point sources, determines the maximum load of the pollutant that the water body can tolerate while still attaining WQSs for the designated uses, and allocates that load among to the various sources, including point source discharges, subject to NPDES permits. *See* 40 CFR § 130.7.

For impaired waters where a TMDL has been developed for a particular pollutant and the TMDL includes a waste load allocation (WLA) for a NPDES permitted discharge, the effluent limitation in the permit must be "consistent with the assumptions and requirements of any available WLA". 40 CFR § 122.44(d)(1)(vii)(B).

### 2.2.4 Reasonable Potential

Pursuant to CWA § 301(b)(1)(C) and 40 CFR § 122.44(d)(1), NPDES permits must contain any requirements in addition to TBELs that are necessary to achieve water quality standards established under § 303 of the CWA. *See also* 33 U.S.C. § 1311(b)(1)(C). In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the permitting authority determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard, including State narrative criteria for water quality." 40 CFR § 122.44(d)(1)(i). To determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS, EPA considers: 1) existing controls on point and non-point sources

[1] NHDES to City of Portsmouth, NH. March 4, 2020. Pease Wastewater Treatment Facility Antidegradation Review. NPDES Permit No. NH0090000.

of pollution; 2) the variability of the pollutant or pollutant parameter in the effluent; 3) the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity); and 4) where appropriate, the dilution of the effluent by the receiving water. *See* 40 CFR § 122.44(d)(1)(ii).

If the permitting authority determines that the discharge of a pollutant will cause, has the reasonable potential to cause, or contribute to an excursion above WQSs, the permit must contain WQBELs for that pollutant. *See* 40 CFR § 122.44(d)(1)(i).

For any pollutants with an existing WQBEL, EPA notes that the analysis described in 40 CFR § 122.44(d)(1)(i) has already been conducted in a previous permitting action demonstrating reasonable potential to cause or contribute to an excursion above WQSs. Therefore, those limits will be carried forward unless it is determined that a more stringent WQBEL is necessary to continue to protect WQS.

From a technical standpoint, when a pollutant is already being controlled as a result of a previously established WQBEL, EPA has determined that it is not appropriate to use new effluent data to reevaluate the need for the existing limit because the reasonable potential to cause or contribute to an excursion of WQS for the uncontrolled discharge was already established in the previous permit. If EPA were to conduct such an evaluation and find no reasonable potential for the controlled discharge to cause or contribute to an excursion of WQS, that finding could be interpreted to suggest that the effluent limit should be removed. However, the new permit without the effluent limit would imply that existing controls are unnecessary, that controls could be removed and then the pollutant concentration would rise to a level where there is, once again, reasonable potential for the discharge to cause or contribute to an excursion of WQS. This could result in an illogical cycle of applying and removing pollutant controls with each permit reissuance. EPA's technical approach on this issue is in keeping with the Act generally and the NPDES regulations specifically, which reflect a precautionary approach to controlling pollutant discharges.

### 2.2.5 State Certification

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate the State WQSs, the State waives, or is deemed to have waived, its right to certify. *See* 33 U.S.C. § 1341(a)(1). Regulations governing state certification are set forth in 40 CFR § 124.53 and § 124.55. EPA has requested permit certification by the State pursuant to 40 CFR § 124.53 and expects that the Draft Permit will be certified.

If the State believes that conditions more stringent than those contained in the Draft Permit are necessary to meet the requirements of either CWA §§ 208(e), 301, 302, 303, 306 and 307, or applicable requirements of State law, the State should include such conditions in its certification and, in each case, cite the CWA or State law provisions upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. EPA includes properly supported State certification conditions in the NPDES permit. The only exception to

this is that the permit conditions/requirements regulating sewage sludge management and implementing CWA § 405(d) are not subject to the State certification requirements. Reviews and appeals of limitations and conditions attributable to State certification shall be made through the applicable procedures of the State and may not be made through EPA's permit appeal procedures of 40 CFR Part 124.

In addition, the State should provide a statement of the extent to which any condition of the Draft Permit can be made less stringent without violating the requirements of State law. Since the State's certification is provided prior to final permit issuance, any failure by the State to provide this statement waives the State's right to certify or object to any less stringent condition.

It should be noted that under CWA § 401, EPA's duty to defer to considerations of State law is intended to prevent EPA from relaxing any requirements, limitations or conditions imposed by State law. Therefore, "[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition." 40 CFR § 124.55(c). In such an instance, the regulation provides that, "The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification." *Id.* EPA regulations pertaining to permit limitations based upon WQSs and State requirements are contained in 40 CFR §§ 122.4(d) and 122.44(d).

## 2.3 Effluent Flow Requirements

Sewage treatment plant discharge is encompassed within the definition of "pollutant" and is subject to regulation under the CWA. The CWA defines "pollutant" to mean, *inter alia*, "municipal...waste" and "sewage…discharged into water." 33 U.S.C. § 1362(6).

Generally, EPA uses effluent flow both to determine whether an NPDES permit needs certain effluent limitations and to calculate the limitations themselves. EPA practice is to use effluent flow as a reasonable and important worst-case condition in EPA's reasonable potential and WQBEL calculations to ensure compliance with WQSs under § 301(b)(1)(C). Should the effluent flow exceed the flow assumed in these calculations, the in-stream dilution would be reduced, and the calculated effluent limitations may not be sufficiently protective (i.e. might not meet WQSs). Further, pollutants that do not have the reasonable potential to exceed WQSs at the lower discharge flow may have reasonable potential at a higher flow due to the decreased dilution. In order to ensure that the assumptions underlying EPA's reasonable potential analyses and permit effluent limitation derivations remain sound for the duration of the permit, EPA may ensure the validity of its "worst-case" wastewater effluent flow assumptions through imposition of permit conditions for effluent flow.[2] In this regard, the effluent flow limitation is a component of WQBELs because the WQBELs are premised on a maximum level flow. The effluent flow limit is also necessary to ensure that other pollutants remain at levels that do not have a reasonable potential to exceed WQSs.

[2] EPA's regulations regarding "reasonable potential" require EPA to consider "where appropriate, the dilution of the effluent in the receiving water," *id* 40 CFR §122.44(d)(1)(ii). *Both* the effluent flow and receiving water flow may be considered when assessing reasonable potential. *In re Upper Blackstone Water Pollution Abatement Dist.,* 14 E.A.D. 577. 599 (EAB 2010). EPA guidance directs that this "reasonable potential: analysis be based on "worst-case" conditions. *See In re Washington Aquaduct Water Supply Sys. 11 E.A.D. 565, 584 (EAB 2004)*

The limitation on wastewater effluent flow is within EPA's authority to condition a permit to carry out the objectives of the Act. *See* CWA §§ 402(a)(2) and 301(b)(1)(C); 40 CFR §§ 122.4(a) and (d), 122.43 and 122.44(d). A condition on the discharge designed to ensure the WQBEL and reasonable potential calculations account for "worst case" conditions is encompassed by the references to "condition" and "limitations" in CWA §§ 402 and 301 and implementing regulations, as they are designed to assure compliance with applicable water quality regulations, including antidegradation. Regulating the quantity of pollutants in the discharge through a restriction on the quantity of wastewater effluent is consistent with the overall structure and purposes of the CWA.

In addition, as provided in Part II.B.1 of this permit and 40 CFR § 122.41(e), the Permittee is required to properly operate and maintain all facilities and systems of treatment and control. Operating the facilities wastewater treatment systems as designed includes operating within the facility's design wastewater effluent flow.

EPA has also included the effluent flow limit in the permit to minimize or prevent infiltration and inflow (I/I) that may result in unauthorized discharges and compromise proper operation and maintenance of the facility. Improper operation and maintenance may result in non-compliance with permit effluent limitations. Infiltration is groundwater that enters the collection system though physical defects such as cracked pipes or deteriorated joints. Inflow is extraneous flow added to the collection system that enters the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems. Significant I/I in a collection system may displace sanitary flow, reducing the capacity available for treatment and the operating efficiency of the treatment works and to properly operate and maintain the treatment works.

Furthermore, the extraneous flow due to significant I/I greatly increases the potential for sanitary sewer overflows (SSOs) in separate systems. Consequently, the effluent flow limit is a permit condition that relates to the permittee's duty to mitigate (*i.e.*, minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment) and to properly operate and maintain the treatment works. *See* 40 CFR §§ 122.41(d), (e).

## 2.4 Monitoring and Reporting Requirements

### 2.4.1 Monitoring Requirements

Sections 308(a) and 402(a)(2) of the CWA and the implementing regulations at 40 CFR Parts 122, 124, 125, and 136 authorize EPA to include monitoring and reporting requirements in NPDES permits.

The monitoring requirements included in this permit have been established to yield data representative of the Facility's discharges in accordance with CWA §§ 308(a) and 402(a)(2), and consistent with 40 CFR §§ 122.41(j), 122.43(a), 122.44(i) and 122.48. The Draft Permit specifies routine sampling and analysis requirements to provide ongoing, representative information on

the levels of regulated constituents in the discharges. The monitoring program is needed to enable EPA and the State to assess the characteristics of the Facility's effluent, whether Facility discharges are complying with permit limits, and whether different permit conditions may be necessary in the future to ensure compliance with technology-based and water quality-based standards under the CWA. EPA and/or the State may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to CWA § 304(a)(1), State water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including, but not limited to, those pollutants listed in Appendix D of 40 CFR Part 122.

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

- The method minimum level[4] (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or

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

- The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

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

### 2.4.2 Reporting Requirements

The Draft Permit requires the Permittee to report monitoring results obtained during each calendar month to EPA and the State electronically using NetDMR. The Permittee must submit a Discharge Monitoring Report (DMR) for each calendar month no later than the 15th day of the month following the completed reporting period.

NetDMR is a national web-based tool enabling regulated CWA permittees to submit DMRs electronically via a secure internet application to EPA through the Environmental Information Exchange Network. NetDMR has eliminated the need for participants to mail in paper forms to EPA under 40 CFR §§ 122.41 and 403.12. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/. Further information about NetDMR can be found on EPA's NetDMR support portal webpage.[5]

With the use of NetDMR, the Permittee is no longer required to submit hard copies of DMRs and reports to EPA and the State unless otherwise specified in the Draft Permit. In most cases, reports required under the permit shall be submitted to EPA as an electronic attachment through NetDMR. Certain exceptions are provided in the permit, such as for providing written notifications required under the Part II Standard Conditions.

## 2.5 Standard Conditions

The standard conditions, included as Part II of the Draft Permit, are based on applicable regulations found in the Code of Federal Regulations. *See generally* 40 CFR Part 122.

## 2.6 Anti-backsliding

The CWA's anti-backsliding requirements prohibit a permit from being renewed, reissued or modified to include with less stringent limitations or conditions than those contained in a previous permit except in compliance with one of the specified exceptions to those requirements. *See* CWA §§ 402(o) and 303(d)(4) and 40 CFR § 122.44(l). Anti-backsliding provisions apply to effluent limits based on technology, water quality and/or state certification requirements.

All proposed limitations in the Draft Permit are at least as stringent as limitations included in the 2000 Permit unless specific conditions exist to justify relaxation in accordance with CWA § 402(o) or § 303(d)(4). Discussion of any less stringent limitations and corresponding exceptions to anti-backsliding provisions is provided in the sections that follow.

[5] https://netdmr.zendesk.com/hc/en-us/articles/209616266-EPA-Region-1-NetDMR-Information

## 3.0 Description of Facility and Discharge

### 3.1 Location and Type of Facility

The location of the treatment plant and the outfall 005 to Piscataqua River are shown in Figure 1. The longitude and latitude of the outfall is N 43° 6' 10.8", W 70° 47' 25.8".

The Pease Wastewater Treatment Facility (WWTF) is a secondary wastewater treatment facility that is engaged in the collection and treatment of municipal and industrial wastewater. Currently, the Facility serves approximately 9,000 residents in Portsmouth, NH, with the collection system primarily focused along Arthur F. Brady Drive and Market Street. The Facility currently has a design flow of 1.20 MGD, though it is seeking an increase to 1.77 MGD. The annual average daily flow reported in the 2019 application was 0.65 MGD, and the median for the last 5 years has been 0.69 MGD. The system is a separate system with no combined sewers. Wastewater is comprised of domestic, commercial and industrial sewage and some septage.

There are 6 industrial users that discharge to the POTW: (1) Lonza Biologics, Inc. consisting of process and non-process wastewater which contributes an average of 379,700 gallons per day, (2) Craft Brew Alliance consisting of process wastewater which contributes an average of 160,000 gallons per day (3) Seacoast Media Group consisting of process wastewater which contributes an average of 3,500 gallons per day (4) Ionbond consisting of process and non-process wastewater which contributes an average of 900 gallons per day, (5) NH Biotechnology Education and Training Center consisting of process wastewater which contributes an average of 6,500 liters per year and (6) New Hampshire Air National Guard consisting of process wastewater which contributes an average of 105 gallons/month. Pollutants introduced into POTWs by a non-domestic source shall not pass through the POTW or interfere with the operation or performance of the treatment works.

A quantitative description of the discharge in terms of effluent parameters, based on monitoring data submitted by the permittee from March 2016 through February 2021 is provided in Appendix A of this Fact Sheet.

#### 3.1.1 Treatment Process Description

The Pease Wastewater Treatment Facility (WWTF) is an activated sludge secondary treatment plant. Influent enters the Facility and flows through a grinder, grit chamber, and mechanical screen. Then the influent is pumped into one of two primary clarifiers. One of the primary clarifiers is currently inoperable due to ongoing construction. After leaving the primary clarifier, influent is split into two aerated batch reactors for treatment. Flow from the primary clarifier enters each batch reactor by alternating every 180 minutes between the two reactors. The reactors are aerated by removable aeration grids located along their respective walls. After exiting the batch reactors, the flow enters two equalization tanks, which are operated in parallel. The equalization tanks allow for settling, in addition to retarding the flow, prior to it entering the chlorine contact tanks. At the head of the chlorine contact tank, ammonia is added to mitigate the production of organic chloramines (by, instead, catalyzing the creation of inorganic

chloramines). Afterwards, sodium hypochlorite is added for disinfection, and sodium bisulfate is subsequently added for dechlorination.

Upon leaving the treatment plant, the effluent flows beneath Arthur F. Brady Drive and alongside an unnamed tributary before combining with Newington's WWTF effluent and being diffused into the Piscataqua River, approximately 300 feet from shore. A flow diagram of the Treatment Facility is shown in Figure 2.

Waste sludge is pumped from the clarifiers' return sludge lines, batch reactors, and equalization tanks to a sludge holding tank and then dewatered via belt press and air drying following chemical addition of polymer (Clarifloc) and potassium permanganate. The dried sludge is transported under contract with Turnkey Landfill, in Rochester, NH, for disposal. The average mass of sludge shipped for incineration in 2015 was 172 dry metric tons.

### 3.1.2 Collection System Description

The Pease WWTF is served by a separate sewer system. A separate sanitary sewer conveys domestic, industrial and commercial sewage, but not stormwater. It is part of a "two pipe system" consisting of separate sanitary sewers and storm sewers. The two systems have no interconnections; the sanitary sewer leads to the wastewater treatment plant and the storm sewers discharge to a local water body.

## 4.0 Description of Receiving Water and Dilution

### 4.1 Receiving Water

The Pease WWTF discharges through Outfall 005 into the Piscataqua River within Segment NHEST600031001-02-01. This segment is 0.6132 square miles. The Piscataqua River and its tributaries, including Great Bay, are part of the Great Bay estuary. The estuary ultimately discharges to the Gulf of Maine, Atlantic Ocean.

Segment NHEST600031001-02-01 of the Piscataqua River is classified as a Class B water by the State of New Hampshire. According to New Hampshire's WQS (RSA 485-A:8), "*Class B waters shall be of the second highest quality and shall have no objectionable physical characteristics, shall contain a dissolved oxygen content of at least 75 percent of saturation, and shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 126 Escherichia coli per 100 milliliters, or greater than 406 Escherichia coli per 100 milliliters in any one sample; and for designated beach areas shall contain not more than a geometric mean based on at least 3 samples obtained over a 60-day period of 47 Escherichia coli per 100 milliliters, or 88 Escherichia coli per 100 milliliters in any one sample; unless naturally occurring. There shall be no disposal of sewage or waste into said waters except those which have received adequate treatment to prevent the lowering of the biological, physical, chemical or bacteriological characteristics below those given above, nor shall such disposal of sewage or waste be inimical to aquatic life or to the maintenance of aquatic life in said receiving waters. The pH range for said waters shall be 6.5 to 8.0 except when due to natural causes. Any stream temperature increase associated with the discharge of treated sewage, waste or cooling*

*water, water diversions, or releases shall not be such as to appreciably interfere with the uses assigned to this class. The waters of this classification shall be considered as being acceptable for fishing, swimming and other recreational purposes and, after adequate treatment, for use as water supplies. Where it is demonstrated to the satisfaction of the department that the class B criteria cannot reasonably be met in certain surface waters at all times as a result of combined sewer overflow events, temporary partial use areas shall be established by rules adopted under RSA 485-A:6, XI-c, which meet, as a minimum, the standards specified in paragraph III.*

*Tidal waters utilized for swimming purposes shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 35 enterococci per 100 ml, or 104 enterococci per 100 milliliters in any one sample, unless naturally occuring. Those tidal waters used for growing or taking of shellfish for human consumption shall, in addition to the foregoing requirements, be in accordance with the criteria recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration.*"

The Piscataqua River, segment NHEST600031001-02-01, is listed in the final State of *New Hampshire 2018 List of Threatened or Impaired Water that require a TMDL* as a Category 5 "Waters Requiring a TMDL.[6] The pollutants requiring a TMDL are estuarine bioassessments, polychlorinated biphenyls, and dioxin (including 2,3,7,8-TCDD). To date no TMDL has been developed for this segment for any of the listed impairments and the priority is listed as low. The status of each designated use is presented in Table 1.

**Table 1 – Summary of Designated Uses and Listing Status**

| **Designated Use** | **Status** |
|---|---|
| Aquatic Life Integrity | Impaired/TMDL needed, Severe Impairment |
| Fish Consumption | Impaired/TMDL needed, Marginal Impairment |
| Potential Drinking Water Supply | Supports Parameter well above criteria |
| Primary Contact Recreation | Insufficient Information/Potentially Attaining Standard |
| Secondary Contact Recreation | Insufficient Information/No data |
| Shellfish Consumption | Impaired/TMDL needed, Marginal Impairment |
| Wildlife | Insufficient Information/No data |

EPA has proposed effluent limits in the Draft Permit that ensure that the increased discharge results in no more than an insignificant degradation of water quality in the Piscataqua River and the downstream waters.

### 4.2 Ambient Data

A summary of the ambient data (if any) collected in the receiving water in the vicinity of the outfall that is referenced in this Fact Sheet can be found in Appendix A of this Fact Sheet.

### 4.3 Available Dilution

[6] 2018 State of New Hampshire 303(d) Surface Water Quality List. NHDES. August 8, 2019

To ensure that discharges do not cause or contribute to violations of WQS under all expected conditions, WQBELs are derived assuming critical conditions for the receiving water[7]. For tidal waters, the low flow condition shall be equivalent to the conditions that result in a dilution that is exceeded 99% of the time (*See* Env-Wq 1705.02(b)).

The Pease WWTF discharge is located approximately 300 feet from the New Hampshire bank of the Piscataqua River at a depth between 15-30 feet mean water level. The outfall is fitted with eight duckbill diffuser ports to enhance dilution.

The previous permit relied on a 1998 study and modeling effort[8] that was used to determine the best location for a new outfall at that time. That modeling was done for a proposed four-port diffuser and it was determined that it would produce a dilution greater than 100:1 during critical tidal conditions.

The City of Portsmouth has requested an increase in the design flow of the Facility from 1.2 MGD to 1.77 MGD.

CORMIX modeling by NHDES determined that this change would not affect the dilution factor. Recent CORMIX modeling by NHDES using CORMIX Version 11 resulted in a minimum dilution of 147 at the projected effluent flow of 1.77 MGD. The minimum dilution at the projected effluent flow of 1.77 MGD was 149; however, in accordance with the NH Method for Determining Dilution Factors for Marine/Estuarine Discharges[9] and Env-Wq 1705.02(b), the maximum dilution factor used for the development of this NPDES permit is 100. The CORMIX session report and prediction files can be found in Appendix B.

## 5.0 Proposed Effluent Limitations and Conditions

The proposed effluent limitations and conditions derived under the CWA and State WQSs are described below. These proposed effluent limitations and conditions, the basis of which are discussed throughout this Fact Sheet, may be found in Part I of the Draft Permit.

### 5.1 Effluent Limitations and Monitoring Requirements

In addition to the State and Federal regulations described in Section 2, data submitted by the permittee in its permit application, in monthly discharge monitoring reports (DMRs) and in WET test reports from March 2016 to February 2021 (the "review period") were used to identify the pollutants of concern and to evaluate the discharge during the effluent limitations development process (*See* Appendix A). The reasonable potential analysis is included in Appendix C and results are discussed in the sections below.

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[7] EPA Permit Writer's Manual, Section 6.2.4
[8] Letter. From Underwood Engineers, Inc. to Fred B. Gay, EPA, January 30, 1998, RE: Outfall Location Revisions, Outfall Improvements, Pease Development Authority, Portsmouth, NH, NPDES Permit Renewal NH0090000, Serial No.005.
[9] NHDES, *NH Method for Determining Dilution Factors for Marine/Estuarine Discharges*, October 28, 2003

### 5.1.1 Effluent Flow

The effluent flow in the 2000 Permit is a reporting requirement only. The DMR data during the review period show that the average monthly flow ranged from 0.513 MGD to 0.966 MGD.

The flow reporting requirement has been changed in the Draft Permit to an effluent limit. The flow effluent limit reflects the design flow of the upgraded facility of 1.77 MGD and is consistent with the findings of the antidegradation review that was conducted following the Permittee's request for an increase in its design flow (also see Section 2.2.2 of this Fact Sheet)[10,11,12].

The rolling average flow limit of 1.2 MGD shall remain in effect until completion of facility expansion, whereupon the rolling average flow limit of 1.77 MGD shall go into effect. The Draft Permit includes an average monthly flow limit of 1.77 MGD, reported as a rolling annual average. The Draft Permit requires that flow be measured continuously and that the rolling annual average flow, as well as the average monthly and maximum daily flow for each month be reported. The rolling annual average flow is calculated as the average of the flow for the reporting month and 11 previous months.

### 5.1.2 Biochemical Oxygen Demand ($BOD_5$)

#### 5.1.2.1 $BOD_5$ Concentration Limits

The average monthly and average weekly $BOD_5$ concentration limits in the 2000 Permit were based on the secondary treatment standards in 40 CFR § 133.102 and included as an average monthly limit of 30 mg/L, and an average weekly limit of 45 mg/L. The daily maximum limit of 50 mg/L was based on best professional judgment.

A review of DMR data submitted from March 2016 through February 2021 shows that there have been two permit violations of the $BOD_5$ concentration limits. In June 2017, the monthly average $BOD_5$ concentration was reported as 45.5 mg/L and the maximum daily $BOD_5$ concentration was reported as 51 mg/L.

The Draft Permit proposes the same $BOD_5$ concentration limits as in the 2000 Permit as there have been no changes to the secondary treatment standards. The monitoring frequency remains twice per week. As NHDES noted in its March 4, 2020 antidegradation review, once the actual flow from the facility exceeds 1.2 MGD, the concentration of $BOD_5$ in the effluent will need to be reduced to ensure compliance with the load limits discussed in Section 5.1.2.2 below.

#### 5.1.2.2 $BOD_5$ Mass Limits

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[10] NHDES to City of Portsmouth, NH. March 4, 2020. Pease Wastewater Treatment Facility Antidegradation Review. NPDES Permit No. NH0090000.
[11] NHDES to U.S. EPA. July 28, 2021. Update to Pease Wastewater Treatment Facility Antidegradation Review. NPDES Permit No. NH0090000.
[12] NHDES to U.S. EPA. March 15, 2022. Update to Pease Wastewater Treatment Facility Antidegradation Review. NPDES Permit No. NH0090000.

The mass-based $BOD_5$ limits in the 2000 Permit are 300 lb/day (average monthly), 450 lb/day (average weekly), and 500 mg/L (maximum daily). The DMR data from the review period shows that there have been no violations of the $BOD_5$ mass limits.

The Draft Permit continues these limits in accordance with anti-backsliding provisions at 40 CFR § 122.44(l). The monitoring frequency remains twice per week.

### 5.1.3 Total Suspended Solids (TSS)

#### 5.1.3.1 TSS Concentration Limits

The average monthly and average weekly TSS concentration limits in the 2000 Permit were based on the secondary treatment standards in 40 CFR § 133.102 and included as an average monthly limit of 30 mg/L, and an average weekly limit of 45 mg/L. The daily maximum limit of 50 mg/L was based on best professional judgment.

A review of DMR data submitted from March 2016 through February 2021 shows that there has been one violation of the TSS concentration limits. In June 2017, the weekly average TSS concentration was reported as 71.2 mg/L.

The Draft Permit proposes the same TSS concentration limits as in the 2000 Permit as there have been no changes to the secondary treatment standards. As NHDES noted in its March 4, 2020 antidegradation review, once the actual flow from the facility exceeds 1.2 MGD, the concentration of TSS in the effluent will need to be reduced to ensure compliance with the load limits discussed in Section 5.1.3.2 below. The monitoring frequency remains twice per week.

#### 5.1.3.2 TSS Mass Limits

The mass-based TSS limits in the 2000 Permit are 300 lb/day (average monthly), 450 lb/day (average weekly), and 500 mg/L (maximum daily). The DMR data from the review period shows that there have been two violations of TSS mass limits. The facility had one violation of the average weekly limit, which occurred in June 2017, and one violation of the maximum daily limit, which occurred in May 2017.

The Draft Permit continues these limits in accordance with anti-backsliding provisions at 40 CFR § 122.44(l). The monitoring frequency remains twice per week.

### 5.1.4 Eighty-Five Percent (85%) $BOD_5$ and TSS Removal Requirement

In accordance with the provisions of 40 CFR § 133.102(a)(3) and (b)(3), the 2000 Permit requires that the 30-day average percent removal for $BOD_5$ and TSS be not less than 85%. The DMR data during the review period shows that the median $BOD_5$ and TSS removal percentages are 98% and 98%, respectively. There were no violations of the 85% removal requirement for $BOD_5$ or TSS during that period.

The requirement to achieve 85% $BOD_5$ and TSS removal has been carried forward into the Draft Permit.

### 5.1.5 pH

Consistent with the requirements of New Hampshire's WQS at RSA 485-A:8 II, "The pH for said (Class B) waters shall be 6.5 to 8.0 except when due to natural causes." The monitoring frequency is once per day. The DMR data during the review period show that there have been no violations of the pH limitations in the 2000 permit.

The pH requirements in the 2000 Permit are carried forward into the Draft Permit as there has been no change in the WQSs with regards to pH. The limitations are based on CWA 301(b)(1)(C) and 40 CFR § 122.44(d).

### 5.1.6 Bacteria

The 2000 Permit includes effluent limits for bacteria using fecal coliform bacteria as the indicator bacteria for the protection of shellfishing uses. These limits are 14/100 mL for average monthly and average weekly and that no more than 10% of samples could exceed a MPN of 43 per 100 mL for a five-tube decimal dilution test.

New Hampshire State statute N.H. RSA 485-A:8,V, which was recently amended[13], specifies that tidal waters utilized for swimming purposes shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 35 *enterococci* per 100 milliliters, or 104 *enterococci* per 100 milliliters in any one sample, unless naturally occurring. Tidal waters used for growing or taking of shellfish for human consumption shall not exceed a geometric mean most probable number (MPN) of 14 organisms per 100 ml for Fecal Coliform, nor shall more than 10 percent of the samples exceed an MPN of 28 per 100 ml for fecal coliform, or other values of equivalent protection based on sampling and analytical methods used by the department of environmental services shellfish program and approved in the latest revision of the National Shellfish Sanitation Program, Guide for The Control of Molluscan Shellfish. Both sets of standards apply to this WWTF and have been established as permit limits. The average monthly limit is determined by calculating the geometric mean of the daily sample values.

The sampling frequency for both bacteria is once per day, which is consistent with EPA/NHDES-WD Effluent Monitoring Guidance for facilities not using lagoons or sand filters for secondary treatment.

### 5.1.7 Total Residual Chlorine

The 2000 Permit includes effluent limitations for total residual chlorine (TRC) of 0.75 mg/L (average monthly) and 1.0 mg/L (maximum daily). The DMR data during the review period show that there has been one violation of the TRC maximum daily limit in September 2016.

[13] February 2, 2022 letter from Ken Moraff, USEPA to Ted Diers, NHDES - Review and Action on New Hampshire Surface Water Quality Standards Amendment at RSA 485-A:8

The TRC permit limits are based on the New Hampshire Code of Administrative Rules, Env-Wq 1703.21 and Table 1703-1. These marine water criteria for chlorine are 7.5 µg/L (chronic) and 13 µg/L (acute). Because the upstream chlorine is assumed to be zero in this case, the water quality-based chlorine limits are calculated as the criteria times the dilution factor, as follows:

Chronic criteria * dilution factor = Chronic limit
7.5 µg/L * 100 = 0.75 mg/L (average monthly)

Acute criteria * dilution factor = Acute limit
13 µg/L * 100 = 1.3 mg/L (maximum daily)

EPA Region 1 has established a maximum TRC limitations of 1.0 mg/L, so the maximum daily limit is 1.0 mg/L. The TRC requirements in the 2000 Permit are carried forward into the Draft Permit. The monitoring frequency remains twice per day.

During the site visit the Permittee indicated that they will be moving from using chlorine disinfection to using ultraviolet (UV) disinfection. The draft permit includes TRC limits which apply any time chlorine is added at any point in the treatment process (i.e., for conducting maintenance or when chlorine is used as a backup disinfection method).

### 5.1.8 Ammonia

Nitrogen in the form of ammonia can reduce the receiving stream's dissolved oxygen concentration through nitrification and can be toxic to aquatic life, particularly at elevated temperatures.

The 2000 Permit does not include ammonia limits, but the Permittee was required to monitor and report effluent and ambient ammonia concentrations on a biannual basis as part of the Whole Effluent Toxicity (WET) testing. Ambient data, taken upstream of the outfall in the Piscataqua River, is presented in Appendix A and shows the median concentration for the warm weather period (April 1 through October 31) is 0.08 mg/L.

The marine ammonia criteria in the NH WQS (Env-Wq 1703.27 through 1703.32) are dependent on pH, temperature and salinity.

In determining whether the discharge has the reasonable potential to cause or contribute to excursions above the instream water quality criteria for ammonia, EPA used the mass balance equation presented in Appendix C for both warm and cold weather conditions to project the ammonia concentration downstream of the discharge. If there is reasonable potential, this mass balance equation is also used to determine the limit that is required in the permit. Because no cold weather effluent ammonia data were available, EPA used the warm weather median concentration, 14.8 mg/L, as an estimate of the cold weather effluent ammonia concentration.

To determine the applicable ammonia criteria, EPA assumes a warm weather temperature of 25° C and a cold weather temperature of 5° C. EPA used the ambient monitoring shown in Appendix A, which indicates that the median pH is 7.8 S.U. Ambient data provided by NHDES indicate

that in 2015 (the most recent data year), salinity in the Lower Piscataqua River ranged from 0.14 ppt – 31.9 ppt, with 341 measurements. Because the salinity frequently exceeded 30 ppt, EPA used that value to determine the ammonia criteria.

Based on the information and assumptions described above, Appendix C presents the applicable ammonia criteria, the details of the mass balance equation, the reasonable potential determination, and, if necessary, the limits required in the Draft Permit. As shown, there is no reasonable potential for the facility to cause or contribute to the exceedance of water quality criteria, so the Draft Permit does not require ammonia limits. Effluent and ambient monitoring for ammonia will continue to be required in the quarterly WET tests.

### 5.1.9 Nutrients

Nutrients are compounds containing nitrogen and phosphorus. Although nitrogen and phosphorus are essential for plant growth, high concentrations of these nutrients can cause eutrophication, a condition in which aquatic plant and algal growth is excessive. Plant and algae respiration and decomposition reduces dissolved oxygen in the water, creating poor habitat for fish and other aquatic animals. Recent studies provide evidence that both phosphorus and nitrogen can play a role in the eutrophication of certain ecosystems. However, typically phosphorus is the limiting nutrient triggering eutrophication in freshwater ecosystems and nitrogen in marine or estuarine ecosystems. Thus, for this receiving water, nitrogen is the nutrient of concern discussed below.

#### 5.1.9.1 Total Nitrogen

The Pease WWTF has been authorized to discharge nitrogen under the Great Bay Total Nitrogen General Permit. Their discharge under that permit became effective on May 1, 2021 with authorization number NHG58A007. Therefore, the discharge of nitrogen is not included in this individual permit.

### 5.1.10 Metals

#### 5.1.10.1 Applicable Metals Criteria

State water quality criteria for cadmium, copper, lead, nickel and zinc are established in terms of dissolved metals. However, many inorganic components of domestic wastewater, including metals, are in particulate form, and differences in the chemical composition between the effluent and the receiving water affects the partitioning of metals between the particulate and dissolved fractions as the effluent mixes with the receiving water, often resulting in a transition from the particulate to dissolved form (*The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007]). Consequently, quantifying only the dissolved fraction of metals in the effluent prior to discharge may not accurately reflect the biologically-available portion of metals in the receiving water. Regulations at 40 CFR § 122.45(c) require, with limited exceptions, that effluent limits for metals in NPDES permits be expressed as total recoverable metals.

The criteria for cadmium, copper, lead, nickel and zinc are presented in Appendix C based on

EPA's National Recommended Water Quality Criteria: 2002, as adopted by the New Hampshire Code of Administrative Rules, Env-Wq 1703.21 and Table 1703.1.

#### 5.1.10.2 Reasonable Potential Analysis and Limit Derivation

To determine whether the effluent has the reasonable potential to cause or contribute to an exceedance above the in-stream water quality criteria for each metal, EPA uses the mass balance equation presented in Appendix C to project the concentration downstream of the discharge and, if applicable, to determine the limit required in the permit.

The results of this analysis for each metal are presented in Appendix C. As shown, there is no reasonable potential for aluminum, cadmium, nickel and zinc, so the Draft Permit does not propose limits for these metals.

Effluent and ambient monitoring for each of these metals will continue to be required in the WET tests.

#### 5.1.10.3 Arsenic

Arsenic is a naturally occurring element that is found in combination with either inorganic or organic substances to form many different compounds. Inorganic arsenic compounds are found in soils, sediments, and groundwater. These compounds occur either naturally or as a result of mining, ore smelting, and industrial use of arsenic. Organic arsenic compounds are found mainly in fish and shellfish. In the past, inorganic forms of arsenic were used in pesticides and paint pigment. The NH WQS at Env-Wq 1703.21(b) contain arsenic water quality criteria for both protection of aquatic life and protection of human health. The criteria for protection of aquatic life in marine waters are 36 µg/L (chronic) and 69 µg/L (acute), expressed in the form of dissolved arsenic[14]. The criterion for protection of human health is 0.14 µg/L (fish consumption only[15]), expressed in the form of inorganic arsenic.

The 2000 Permit did not require arsenic monitoring. However, based on the facility's flow increase request an antidegradation review was conducted in 2019 which required monitoring for arsenic in both the effluent discharged from the WWTF and the Piscataqua River, upstream from the discharge. The four sampling rounds resulted in the ambient dissolved arsenic concentrations of 0.76 µg/L to 0.97 µg/L and effluent dissolved arsenic concentrations of 3.15 µg/L to 4.63 µg/L. These data are well below the aquatic life criteria (*i.e.*, 36 and 69 µg/L) and indicate that there is no reasonable potential to cause or contribute to an excursion above the aquatic life arsenic criteria. Regarding the human health criterion (0.14 µg/L), the antidegradation study did not include data to determine the fraction of arsenic in the discharge that may be in the inorganic form.

Upon reviewing these data, NHDES submitted an antidegradation review letter update on March 15, 2022 that said the arsenic discharge is determined to be insignificant with respect to the

[14] Based on Env-Wq 1703-23(e), Table 1703-2 the conversion factor from dissolved arsenic to total arsenic is 1.0 for both chronic and acute. Therefore, the aquatic life criteria may be expressed as either dissolved or total arsenic.
[15] The criterion for protection of human health by "Water & Fish Ingestion" does not apply in this case given that the receiving water is marine and not used as a drinking water source.

aquatic life criteria and no numeric limit is needed. However, with respect to the human health criterion, NHDES said the following:

> "NHDES is not able to conduct an antidegradation review using the water quality criterion for fish consumption for human health protection. The water quality criterion for fish consumption for human health protection is 0.14 ug/L, and it is for inorganic arsenic only. There is no approved method under 40 CFR Part 136 for sampling inorganic arsenic in wastewater. Because Env-Wq 1706.01 requires all procedures used for the purpose of collecting, preserving, and analyzing samples to be as specified in 40 CFR Part 136, and there is no approved method under 40 CFR Part 136 for sampling inorganic arsenic in wastewater, NHDES cannot require inorganic arsenic sampling or analysis for this antidegradation review. Further, NHDES does not have a data-derived ratio to apply to the total arsenic data to estimate the inorganic concentration.
>
> Should EPA require a limit for total arsenic in order to ensure that the requested flow increase at the Pease WWTF would not have an increased impact on the receiving water, a load limit could be used. A "hold the load" limit could be calculated by multiplying the maximum concentration detected in the effluent by a multiplication factor (based on four samples) and the current design flow. This indicates that the projected maximum load at the current design flow would be 0.22 lb/day (0.00463 mg/L x 4.7 x 8.34 x 1.2 mgd).
>
> Because industrial sources contribute to the Pease WWTF's increased design flow, NHDES has determined that it is important for the WWTF to monitor for total arsenic in its effluent and determine potential sources of arsenic in the collection system to ensure that industrial arsenic inputs to the WWTF are not increased. Therefore, NHDES recommends a monitoring requirement for total arsenic in the WWTF effluent. In addition, NHDES recommends a requirement for the WWTF to evaluate all potentially significant sources of arsenic in the collection system and provide alternatives for minimizing these sources, as well as for the WWTF to implement alternatives and summarize the actions taken in an annual report."

Subsequent to the antidegradation study, EPA requested that the Permittee collect effluent data concurrently for both total arsenic and inorganic arsenic in order to have a better understanding of the level of inorganic arsenic in the discharge. The results of this sampling round in early 2022 showed total arsenic of 1.93 µg/L and inorganic arsenic of 1.44 µg/L, resulting in a fraction of 0.75 in the inorganic form. Assuming 75% of the arsenic in the effluent is inorganic, EPA divided the maximum effluent value of 4.63 µg/L times 75% by the dilution factor of 100 to find a potential in-stream concentration of 0.03 µg/L inorganic arsenic. Notably, this value is below the human health criterion of 0.14 µg/L inorganic arsenic indicating that the discharge, by itself, does not cause an exceedance of the water quality standard.

However, the ambient dissolved arsenic concentrations from 2019 exceed the applicable inorganic criterion and, as NHDES noted above, there is not sufficient data to determine the fraction of inorganic arsenic in the receiving water. Therefore, EPA cannot determine at this time the remaining assimilative capacity of the receiving water with respect to inorganic arsenic. If the fraction in the receiving water is similar to the 75% found in the effluent, then the ambient

concentration of inorganic arsenic would be above 0.14 µg/L which would mean there is not any remaining assimilative capacity. Given this uncertainty, the Draft Permit establishes a "hold the load" limit to ensure that the flow increase does not result in an increase in inorganic arsenic and is, therefore, in accordance with antidegradation provisions discussed in Section 2.2.2 above. This limit is for total arsenic, in accordance with 40 CFR § 122.45(c), as calculated by NHDES above based on the maximum level in the effluent and the previous design flow of 1.2 MGD, resulting in **0.22 lb/day** (*i.e.*, 0.00463 mg/L x 4.7 x 1.2 MGD x 8.34) with an effluent monitoring frequency of twice per month. Given that the facility is currently in compliance with this "hold the load" effluent limit, the Draft Permit does not include a compliance schedule.

NHDES also recommends an arsenic optimization requirement for the WWTF to evaluate all potentially significant sources of arsenic in the collection system and provide alternatives for minimizing these sources, as well as for the WWTF to implement alternatives and summarize the actions taken in an annual report. Therefore, this requirement is also proposed in the Draft Permit

Additionally, the Draft Permit includes effluent and ambient monitoring of both total arsenic and inorganic arsenic to be done twice per year, once in each 2nd and 3rd calendar quarters concurrent with the Whole Effluent Toxicity (WET) tests within those quarters. Inorganic arsenic monitoring is included for direct comparison to the inorganic human health criterion. Total arsenic monitoring is included to determine the fraction of inorganic arsenic to total arsenic as this fraction may be needed to develop a more stringent limit (if necessary, in the future) in terms of "total recoverable" in accordance with 40 CFR § 122.45(c). Effluent monitoring is included to characterize the discharge. Ambient monitoring (immediately upstream of the influence of the discharge) is included to characterize the assimilative capacity of the receiving water. These data will all be used in the next permit reissuance to determine whether there is the reasonable potential to cause or contribute to an excursion above water quality standards with respect to inorganic arsenic, and if so, to establish a more stringent permit limit at that time.

### 5.1.11 Whole Effluent Toxicity

CWA §§ 402(a)(2) and 308(a) provide EPA and States with the authority to require toxicity testing. Section 308 specifically describes biological monitoring methods as techniques that may be used to carry out objectives of the CWA. Whole effluent toxicity (WET) testing is conducted to ensure that the additivity, antagonism, synergism and persistence of the pollutants in the discharge do not cause toxicity, even when the pollutants are present at low concentrations in the effluent. The inclusion of WET requirements in the Draft Permit will assure that the Facility does not discharge combinations of pollutants into the receiving water in amounts that would be toxic to aquatic life or human health.

In addition, under CWA § 301(b)(1)(C), discharges are subject to effluent limitations based on WQSs. Under CWA §§ 301, 303 and 402, EPA and the States may establish toxicity-based limitations to implement the narrative water quality criteria calling for "no toxics in toxic amounts". *See also* 40 CFR § 122.44(d)(1). The Massachusetts WQSs at 314 CMR 4.05(5)(e) state, "All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife. "New Hampshire statute and regulations state that, "all surface waters shall be free from toxic substances or chemical constituents in concentrations or

combination that injure or are inimical to plants, animals, humans, or aquatic life...." (N.H. RSA 485-A:8, VI and the N.H. Code of Administrative Rules, PART Env-Wq 1703.21(a)(1)). National studies conducted by EPA have demonstrated that domestic sources, as well as industrial sources, contribute toxic constituents to POTWs. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. Some of these constituents may cause synergistic effects, even if they are present in low concentrations. Because of the source variability and contribution of toxic constituents in domestic and industrial sources, reasonable potential may exist for this discharge to cause or contribute to an exceedance of the "no toxics in toxic amounts" narrative water quality standard.

In accordance with current EPA guidance, whole effluent chronic effects are regulated by limiting the highest measured continuous concentration of an effluent that causes no observed chronic effect on a representative standard test organism, known as the chronic No Observed Effect Concentration (C-NOEC). Whole effluent acute effects are regulated by limiting the concentration that is lethal to 50% of the test organisms, known as the $LC_{50.}$ EPA Region 1's guidance recommends that permits for discharges having a dilution factor greater than 100:1 require acute toxicity testing two times per year for two species. This requirement was included in the 2000 permit.

The WET limits in the 2000 Permit are $LC_{50} \geq 50\%$ using the mysid shrimp (*Mysisopsis Bahia*) and the inland silverside minnow (*Menidia beryllina*) as the test species. The Facility has consistently met these limits (Appendix A).

Based on the potential for toxicity from domestic and industrial contributions, effluent variability, the flow increase anticipated by the Draft Permit, the state narrative water quality criterion, the dilution factor of 100, and in accordance with EPA national and regional policy and 40 CFR § 122.44(d), the Draft Permit continues the effluent limits from the 2000 Permit, including the test organisms. However, the testing frequency has been increased to four WET tests (quarterly) per year due to the increased flow, some of which will be from industrial wastewater contributions. Toxicity testing must be performed in accordance with the updated EPA Region 1 WET test procedures and protocols specified in Attachment A, *Marine Acute Toxicity Test Procedure and Protocol* (July 2012) to the Draft Permit.

### 5.1.12 Per- and polyfluoroalkyl substances (PFAS)

As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects.[16] EPA is collecting information to evaluate the potential

[16] EPA, *EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan,* EPA 823R18004, February 2019. Available at: https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

impacts that discharges of PFAS from wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

On September 30, 2019, NHDES adopted Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs) for drinking water at Env-DW 705.06 and Ambient Groundwater Quality Standards (AGQS) at Env-Or 603 for the following PFAS:

| | MCLs/AGQs | MCLGs |
|---|---|---|
| Perfluorohexanesulfonic acid (PFHxS) | 18 ng/L | 0 |
| Perfluorononanoic acid (PFNA) | 11 ng/L | 0 |
| Perfluorooctanesulfonic acid (PFOS) | 15 ng/L | 0 |
| Perfluorooctanoic acid (PFOA) | 12 ng/L | 0 |

The September 2019 PFAS regulations were challenged in state court and are currently enjoined pending resolution of the litigation. On July 23, 2020, the New Hampshire legislature enacted legislation establishing MCLs and AGQSs for these PFAS in State statute at the identical levels as the challenged regulations. The statutory MCLs and AGQSs became effective on July 23, 2020.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, the Draft Permit requires that the facility conduct quarterly influent, effluent and sludge sampling for PFAS chemicals and annual sampling of certain industrial users, the first full calendar quarter beginning six months after EPA has notified the Permittee that appropriate, multi-lab validated test methods are made available by EPA to the public.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality based effluent limits on a facility- specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

> "SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act—
>
> (A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require;".

Since an EPA method for sampling and analyzing PFAS in wastewater and sludge is not currently available, the PFAS sampling requirement in the Draft Permit includes a compliance schedule which delays the effective date of this requirement until the first full calendar quarter beginning 6 months after EPA has notified the Permittee that a multi-lab validated method for wastewater and biosolids is made available to the public on EPA's CWA methods program websites. For wastewater see https://www.epa.gov/cwa-methods/other-clean-water-act-test-methods-chemical and https://www.epa.gov/cwa-methods. For biosolids, see https://www.epa.gov/cwa-methods/other-clean-water-act-test-methods-biosolids. EPA expects these methods will be available by the end of 2021. This approach is consistent with 40 CFR § 122.44(i)(1)(iv)(B) which states that in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters.

### 5.1.13 Trichloroethylene (TCE)

The 2000 Permit included a quarterly monitoring requirement for TCE in the effluent. TCE is a volatile organic compound used mostly in industrial and commercial processes. Review of the DMR data shows that TCE was only detected once, in August 2019, at a concentration of 2.3 µg/L.

The NH WQS (Env-Wq 1703.27 through 1703.32) include a marine acute criterion of 2000 µg/L and a human health criterion of 80 µg/L (fish consumption). Because levels of TCE in the effluent are below the applicable water quality criteria, it is not necessary to use a mass balance to determine reasonable potential. There is no reasonable potential for the discharge to cause or contribute to an excursion from NH WQS for trichloroethylene, and for this reason the Draft Permit does not include a monitoring requirement for TCE.

### 5.1.14 Cyanide

Compounds containing the cyanide group (CN) are used and readily formed in many industrial processes and can be found in a variety of effluents, such as those from steel, petroleum, plastics, synthetic fibers, metal plating, and chemical industries. Cyanide occurs in water in many forms, including: hydrocyanic acid (HCN), the cyanide ion (CN-), simple cyanides, metallocyanide complexes, and as organic compounds. "Free Cyanide" is defined as the sum of the cyanide present as HCN and CN-. "Available" cyanide includes free cyanide plus those cyanide forms that can readily disassociate to release free cyanide. The relative concentrations of these forms depend mainly on pH and temperature. Currently, EPA has approved analytical methods for total, available, and free cyanide in water. Total cyanide includes all the forms of cyanide.

Both HCN and CN- are toxic to aquatic life. However, the vast majority of free cyanide usually exists as the more toxic HCN. And, since CN- readily converts to HCN at pH values that commonly exist in surface waters, EPA's cyanide criteria are stated in terms of free cyanide expressed as CN-. Free cyanide is a more reliable index of toxicity to aquatic life than total cyanide because total cyanides can include nitriles (organic cyanides) and relatively stable

metallocyanide complexes. Since no information is currently available regarding the ratio of free cyanide to total cyanide in the receiving water, EPA assumes that the ratio is 1.

Historically, the Pease WWTF was not required to monitor for cyanide. However, the antidegradation review done by NHDES in support of the facility's flow increase detected 12 µg/L of cyanide in one of four effluent sample. Notably, this is less than the maximum allowable effluent concentration of 24.3 µg/L determined by NHDES based on antidegradation. Further, dividing 12 µg/L by the dilution factor of 100 results in 0.12 µg/L which is significantly lower than the aquatic life criterion of 1.0 µg/L. However, based on that detection NHDES recommended in the March 15, 2022 update to the antidegradation review that the Draft Permit include a monitoring requirement for cyanide in order to "determine a more representative cyanide effluent concentration and whether or not a water quality based limit is needed in future permits." Therefore, the Draft Permit contains a quarterly monitoring requirement for cyanide.

## 5.2 Industrial Pretreatment Program

The Permittee is being required to develop an Industrial Pretreatment Program (IPP) based on authority granted under 40 CFR Part 403 and Section 307 of the CWA. A pollutant introduced into POTWs by a non-domestic source shall not pass through the POTW or interfere with the operation or performance of the treatment works. Further, a POTW with a design flow under 5 MGD may be required to develop an Industrial Pretreatment Program if its effluent limits are exceeded by industrial influent. This Draft Permit is being reissued with a flow increase, which will predominantly be comprised of flows from industrial users. As such, the Permittee is required to develop an Industrial Pretreatment Program. The Draft Permit outlines specific requirements as to how to develop an IPP.

Periodically, the Federal Pretreatment Regulations in 40 CFR Part 403 are amended. Those amendments establish new requirements for implementation of the pretreatment program. Upon reissuance of this NPDES permit, the permittee is obligated to establish a pretreatment program to be consistent with the current Federal regulations. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce EPA approved specific effluent limits (technically-based local limits); (2) revise the local sewer use ordinance or regulation, as appropriate, to be consistent with Federal regulations; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant noncompliance for industrial users; and (6) establish a definition of and track significant industrial users.

Lastly, upon approval of the development of a pretreatment program, the Permittee must submit a pretreatment report detailing the activities of the program for the twelve-month period ending 60 days prior to the due date.

## 5.3 Sludge Conditions

Section 405(d) of the Clean Water Act requires that EPA develop technical standards regarding the use and disposal of sewage sludge. On February 19, 1993, EPA promulgated technical

standards. These standards are required to be implemented through permits. The conditions in the permit satisfy this requirement.

### 5.4 Infiltration/Inflow (I/I)

Infiltration is groundwater that enters the collection system though physical defects such as cracked pipes, or deteriorated joints. Inflow is extraneous flow entering the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems. Significant I/I in a collection system may displace sanitary flow, reducing the capacity and the efficiency of the treatment works and may cause bypasses to secondary treatment. It greatly increases the potential for sanitary sewer overflows (SSOs) in separate systems, and combined sewer overflows (CSOs) in combined systems.

The Draft Permit includes a requirement for the permittee to control infiltration and inflow (I/I) within the sewer collections system it owns and operates. The permittee shall develop an I/I removal program commensurate with the severity of I/I in the collection system. This program may be scaled down in sections of the collection system that have minimal I/I.

### 5.5 Operation and Maintenance of the Sewer System

The standard permit conditions for 'Proper Operation and Maintenance', found at 40 CFR § 122.41(e), require the proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. The requirements at 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. EPA maintains that an I/I removal program is an integral component of ensuring permit compliance with the requirements of the permit under the provisions at 40 CFR § 122.41(d) and (e).

General requirements for proper operation and maintenance, and mitigation have been included in Part II of the permit. Specific permit conditions have also been included in Part I.C. and I.D. of the Draft Permit. These requirements include mapping of the wastewater collection system, preparing and implementing a collection system operation and maintenance plan, reporting of unauthorized discharges including SSOs, maintaining an adequate maintenance staff, performing preventative maintenance, controlling inflow and infiltration to separate sewer collection systems (combined systems are not subject to I/I requirements) to the extent necessary to prevent SSOs and I/I related effluent violations at the Wastewater Treatment Facility, and maintaining alternate power where necessary. These requirements are included to minimize the occurrence of permit violations that have a reasonable likelihood of adversely affecting human health or the environment.

Several of the requirements in the Draft Permit are not included in the 2000 Permit, including collection system mapping, and preparation of a collection system operation and maintenance plan. EPA has determined that these additional requirements are necessary to ensure the proper

operation and maintenance of the collection system and has included schedules in the Draft Permit for completing these requirements.

### 5.6 Compliance Schedule

New Hampshire regulations for schedules of compliance in NPDES Permits can be found at Env-Wq 1701.03. Finally, the 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." *See* 40 CFR § 122.47(a), (a)(1).

### 5.7 Standard Conditions

The standard conditions of the permit are based on 40 CFR §122, Subparts A, C, and D and 40 CFR § 124, Subparts A, D, E, and F and are consistent with management requirements common to other permits.

## 6.0 Federal Permitting Requirements

### 6.1 Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority and imposes requirements on Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (listed species) and habitat of such species that has been designated as critical (a "critical habitat").

Section 7(a)(2) of the ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to ensure that any action it authorizes, funds or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers § 7 consultations for freshwater species. The National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) administers Section 7 consultations for marine and anadromous species.

The Federal action being considered in this case is EPA's proposed NPDES permit for the Pease WWTF's discharges of pollutants. The Draft Permit is intended to replace the 2000 Permit in governing the Facility. As the federal agency charged with authorizing the discharge from this Facility, EPA determines potential impacts to federally listed species and initiates consultation with the Services when required under § 7(a)(2) of the ESA.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants in the expected action area of the outfall to determine if EPA's proposed NPDES permit could potentially impact any such listed species in this section of the Piscataqua River.
Regarding protected species under the jurisdiction of NOAA Fisheries[17], a number of anadromous and marine species and life stages are present in New Hampshire

[17] See §7 resources for NOAA Fisheries at https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=1bc332edc5204e03b250ac11f9914a27.

waters. Various life stages of protected fish, sea turtles and whales have been documented in these coastal and inland waters, either seasonally or year-round. In general, adult and subadult life stages of Atlantic sturgeon (*Acipenser oxyrinchus*) and adult shortnose sturgeon (*Acipenser brevirostrom*) are present in coastal waters. These sturgeon life stages are also found in some rivers in New Hampshire, along with early life stages of protected sturgeon and juvenile shortnose sturgeon. River systems asso
ciated with Great Bay have been designated as critical habitat for Atlantic sturgeon.

Protected marine species, including adult and juvenile life stages of leatherback sea turtles (*Dermochelys coriacea*), loggerhead sea turtles (*Caretta caretta*), Kemp's ridley sea turtles (*Lepidochelys kempii*) and green sea turtles (*Chelonia mydas*) are found in coastal New Hampshire waters. Adult and juvenile life stages of North Atlantic right whales (*Eubalaena glacialis*) and fin whales (*Balaenoptera physalus*) have also been documented in these marine waters. In addition, the New Hampshire coastal area has been designated as part of critical habitat for North Atlantic right whale feeding.

In this case, the Facility's outfall and action area do not overlap with coastal waters where protected marine species are found. The action area does overlap, however, with the expected presence of adult and subadult Atlantic sturgeon, which migrate and forage in the Piscataqua River year-round. The action area also overlaps with shortnose sturgeon adults in the river, which migrate and forage from April 1 through November 30. The action area is also located in or near designated critical habitat for Atlantic sturgeon. Because the action area of the discharge is not expected to overlap with these threatened or endangered species or critical habitat, consultation with NOAA Fisheries under Section 7 of the ESA is not required for this federal action.

These protected sturgeon species life stages, as well as the designated critical habitat, may be influenced by the operation of the Facility. Because these species may be affected by the discharge authorized by the proposed Permit, EPA has thoroughly evaluated the potential impacts of the permit action on these anadromous species through the preparation of a Biological Assessment (BA). EPA is in the process of finalizing the BA. On the basis of the evaluation, EPA's preliminary determination is that this action may affect, but is not likely to adversely affect, the relevant life stages of the NOAA Fisheries listed species above that are expected to inhabit this section of the Piscataqua River. In addition, EPA has made the preliminary determination that the proposed action may affect, but is not likely to adversely affect, the designated Atlantic sturgeon critical habitat that overlaps with the action area.

Therefore, EPA has judged that a formal consultation pursuant to section 7 of the ESA is not required. EPA is seeking concurrence from NOAA Fisheries regarding this determination through the information in the Draft Permit, this Fact Sheet, as well as the detailed BA that will be sent to NOAA Fisheries Protected Resources Division during the Draft Permit's public comment period.

For protected species under the jurisdiction of the USFWS, the dwarf wedgemussel (*Alasmidonta heterodon*), a listed endangered species, has been documented in New Hampshire waters, specifically in the Connecticut River watershed. Information obtained from the

USFWS[18] indicates that the dwarf wedgemussel is not found in the Piscataqua River within the action area resulting from the Pease WWTF's discharge. However, one terrestrial listed threatened species, the northern long-eared bat (*Myotis septentrionalis*) was identified as potentially occurring in the action area of the Pease WWTF's discharge.[19]

According to the USFWS, the threatened northern long-eared bat is found in the following habitats based on seasons, "winter – mines and caves; summer – wide variety of forested habitats." This species is not considered aquatic. However, because the Facility's projected action area in the Piscataqua River and the city of Portsmouth areas overlaps with the general statewide range of the northern long-eared bat, EPA prepared an Effects Determination Letter for the Pease WWTF NPDES Permit Reissuance and submitted it to USFWS. Based on the information submitted by EPA, the USFWS notified EPA by letter, dated July 8, 2021, that the permit reissuance is consistent with activities analyzed in the USFWS January 5, 2016, Programmatic Biological Opinion (PBO)[20]. The PBO outlines activities that are excepted from "take" prohibitions applicable to the northern long-eared bat under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.). The USFWS consistency letter concluded EPA's consultation responsibilities for the Pease WWTF NPDES permitting action under ESA Section 7(a)(2) with respect to the northern long-eared bat. No further ESA section 7 consultation is required with USFWS for this species.

At the beginning of the public comment period, EPA notified USFWS and NOAA Fisheries Protected Resources Division that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

ESA informal consultation with NOAA Fisheries is required as a result of this permitting action. In the future, reinitiation of consultation is required and shall be requested by the EPA or by USFWS/NOAA Fisheries where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the analysis; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this analysis; or (c) If a new species is listed or critical habitat designated that may be affected by the identified action. No take is anticipated or exempted. If there is any incidental take of a listed species, initiation of consultation would be required.

## 6.2 Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (*see* 16 U.S.C. § 1801 et seq., 1998), EPA is required to consult with the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat". *See* 16 U.S.C. § 1855(b).

[18] See §7 resources for USFWS at https://ecos.fws.gov/ipac/.
[19] See USFWS at https://ecos.fws.gov/ipac/.
[20] USFWS Event Code: Event Code: 05E1NE00-2021-E-12359, July 8, 2021.

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". *See* 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH. *See* 50 CFR § 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

EFH is only designated for fish species for which federal Fisheries Management Plans exist. *See* 16 U.S.C. § 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. In a letter to EPA New England dated October 10, 2000, NOAA Fisheries agreed that for NPDES permit actions, EFH initial notification for purposes of consultation can be accomplished in the EFH section of the Draft Permit's supporting Fact Sheet.

The Federal action being considered in this case is EPA's proposed NPDES permit for the Pease WWTF, which discharges through Outfall 005 to the Piscataqua River in Portsmouth, New Hampshire. The portion of the river receiving the discharge is river segment NHEST600031001-02-01.

Based on available EFH information included in the NOAA Fisheries EFH Mapper,[21] EPA has determined that this section of the Piscataqua River at latitude 43º6'18" N, longitude 71º12'35" W, has been designated as EFH for 17 coastal species and relevant life stages and one Habitat Area of Particular Concern (HAPC) for juvenile cod. The species and life stages with designated EFH and HAPC are listed in Table 2.

**Table 2. Species and life stages with designated EFH and Habitat Area of Particular Concern in the vicinity of the Pease WWTF Outfall.**

| Species/Management Unit | Lifestage(s) Found at Location |
|---|---|
| Atlantic Sea Scallop | ALL |
| Atlantic Wolffish | ALL |
| Winter Flounder | Eggs, Juvenile, Larvae/Adult |
| Little Skate | Juvenile, Adult |
| Atlantic Herring | Juvenile, Adult, Larvae |
| Atlantic Cod | Larvae, Adult, Eggs |
| Pollock | Juvenile, Eggs, Larvae |
| Red Hake | Adult, Eggs/Larvae/Juvenile |
| Windowpane Flounder | Adult, Larvae, Eggs, Juvenile |
| Winter Skate | Juvenile |
| Smooth Skate | Juvenile |
| White Hake | Adult, Eggs, Juvenile |
| Thorny Skate | Juvenile |

[21] NOAA EFH Mapper available at http://www.habitat.noaa.gov/protection/efh/efhmapper/

| Species/Management Unit | Lifestage(s) Found at Location |
|---|---|
| Bluefin Tuna | Adult |
| Atlantic Mackerel | Eggs, Larvae, Juvenile |
| Bluefish | Adult, Juvenile |
| Atlantic Butterfish | Adult |
| **HAPC Name** | |
| Inshore 20m Juvenile Cod | |

**EPA's Finding of all Potential Impacts to EFH**

EPA has determined that the operation of this Facility, as governed by this permit action, may adversely affect the EFH of the species listed above or the Habitat Area of Particular Concern. The Draft Permit has been conditioned in the following way to minimize any impacts that reduce the quality and/or quantity of EFH.

- This Draft Permit action does not constitute a new source of pollutants. It is the reissuance of an existing NPDES permit;
- The Facility withdraws no water from the Piscataqua River, so EFH will not be diminished in quality or quantity through impingement or entrainment of EFH designated species or their prey;
- The effluent is rapidly mixed using a diffuser system located approximately 300 feet from shore, at a depth of approximately 15 to 30 feet;
- The effluent has a dilution factor of 100;
- Effluent flow, total suspended solids, biochemical oxygen demand, total residual chlorine, fecal coliform bacteria, Enterococci, pH, and total arsenic are regulated by the Draft Permit to meet water quality standards;
- The Draft Permit prohibits the discharge of pollutants or combination of pollutants in toxic amounts;
- Acute (maximum daily) toxicity tests will be conducted on a whole effluent sample four times a year and must meet an $LC_{50}$ to ensure that the discharge does not present toxicity problems;
- The effluent limitations and conditions in the Draft Permit were developed to be protective of all aquatic life and are not expected to reduce the quality and/or quantity of EFH; and
- The Draft Permit prohibits violations of the state water quality standards.

EPA has determined that the conditions and limitations contained in the Pease WWTF Draft Permit adequately protect the essential fish habitat of the managed species listed above and the Habitat Area of Particular Concern. Further mitigation is not warranted. Should adverse impacts to EFH be detected as a result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NOAA Fisheries Habitat and Ecosystem Services Division will be contacted and an EFH consultation will be reinitiated.

At the beginning of the public comment period, EPA notified NOAA Fisheries Habitat and Ecosystem Services Division that the Draft Permit and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

In addition to this Fact Sheet and the Draft Permit, information supporting EPA's finding will be summarized in a letter under separate cover and submitted to the NOAA Fisheries Habitat and Ecosystem Services Division during the public comment period.

### 6.3 Coastal Zone Management (CZM) Consistency Review

The regulation at 40 CFR § 122.49(d) states "The Coastal Zone Management Act, 16 U.S.C. 1451 et seq. section 307(c) of the Act and implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce) overrides the State's nonconcurrence.

The discharge is within the defined CZM boundaries. The Permittee has submitted a letter dated November 22, 2019 to the New Hampshire Coastal Zone Management Program stating their intention to abide by the CZM water quality and habitat policies. EPA expects that CZM will find the discharge consistent with its policies.

## 7.0 Public Comments, Hearing Requests and Permit Appeals

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to:

Meridith Finegan
EPA Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1533
Email: finegan.meridith@epa.gov

Prior to the close of the public comment period, any person, may submit a written request to EPA for a public hearing to consider the Draft Permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held if the criteria stated in 40 CFR § 124.12 are satisfied. In reaching a final decision on the Draft Permit, EPA will respond

to all significant comments in a Response to Comments document attached to the Final Permit and make these responses available to the public at EPA's Boston office and on EPA's website.

Following the close of the comment period, and after any public hearings, if such hearings are held, EPA will issue a Final Permit decision, forward a copy of the final decision to the applicant, and provide a copy or notice of availability of the final decision to each person who submitted written comments or requested notice. Within 30 days after EPA serves notice of the issuance of the Final Permit decision, an appeal of the federal NPDES permit may be commenced by filing a petition for review of the permit with the Clerk of EPA's Environmental Appeals Board in accordance with the procedures at 40 CFR § 124.19.

## 8.0 Administrative Record

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 documents relating to this draft can be requested from the individual listed above.

The administrative record on which this Draft Permit is based may be accessed at EPA's Boston office by appointment, Monday through Friday, excluding holidays from Meridith Finegan, EPA Region1, 5 Post Office Square, Suite-100 (06-1), Boston, MA 02109-3912 or via email to finegan.meridith@epa.gov.

March 2022
Date

Ken Moraff, Director
Water Division
U.S. Environmental Protection Agency

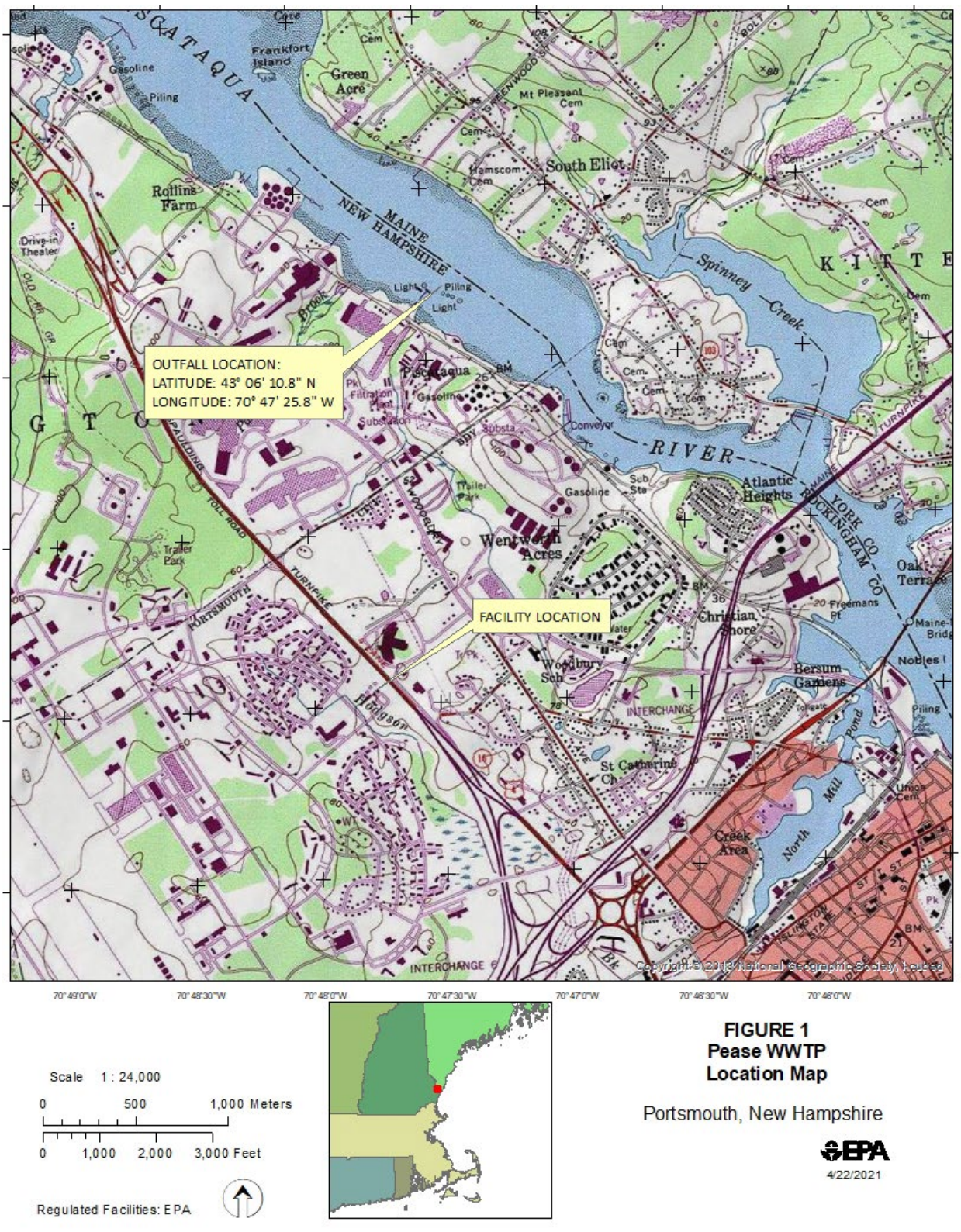


**Figure 1: Location of the Pease WWTP**

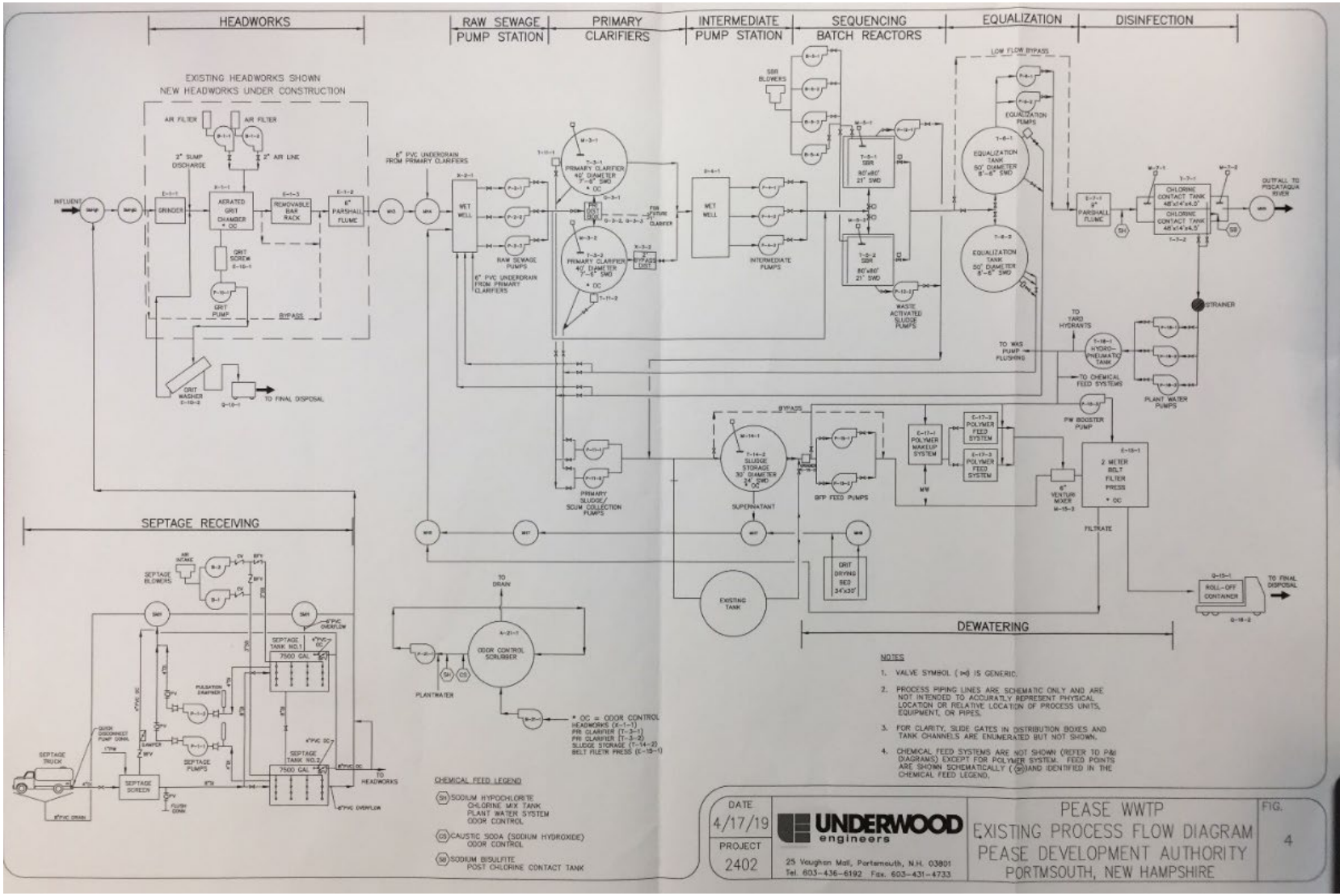


**Figure 2: Flow diagram**

**Outfall 005 - DMR Data**

| Parameter | Flow | Flow | BOD5 | BOD5 | BOD5 | BOD5 | BOD5 | BOD5 |
|---|---|---|---|---|---|---|---|---|
| | Monthly Ave | Daily Max | Monthly Ave | Monthly Ave | Weekly Ave | Weekly Ave | Daily Max | Daily Max |
| Units | MGD | MGD | lb/d | mg/L | lb/d | mg/L | lb/d | mg/L |
| Effluent Limit | Report | Report | 300 | 30 | 450 | 45 | 500 | 50 |
| | | | | | | | | |
| Minimum | 0.513 | 0.638 | 0 | 0 | 19.2 | 0 | 0 | 0 |
| Maximum | 0.966 | 1.555 | 179.3 | 25.8 | 311.6 | 45.5 | 318.2 | 51 |
| Median | 0.6875 | 0.947 | 43.05 | 6.5 | 59.95 | 9.15 | 80.25 | 12 |
| No. of Violations | N/A | N/A | 0 | 0 | 0 | 1 | 0 | 1 |
| | | | | | | | | |
| 3/31/2016 | 0.821 | 1.019 | 22.6 | 3 | 28.2 | 3.5 | 56.3 | 7 |
| 4/30/2016 | 0.812 | 1.07 | 28.6 | 4.1 | 55.9 | 7.5 | 84.1 | 13 |
| 5/31/2016 | 0.682 | 0.89 | 16.2 | 0 | 73.1 | 12.5 | 146.2 | 25 |
| 6/30/2016 | 0.627 | 0.814 | 65 | 12.2 | 96.7 | 19 | 179.4 | 35 |
| 7/31/2016 | 0.607 | 0.809 | 66 | 11.5 | 178.2 | 32.5 | 143.5 | 22 |
| 8/31/2016 | 0.609 | 0.773 | 100.7 | 18.8 | 127.4 | 25.5 | 137.9 | 26 |
| 9/30/2016 | 0.594 | 0.766 | 70 | 12.9 | 128.6 | 25 | 156.5 | 34 |
| 10/31/2016 | 0.627 | 0.84 | 42.5 | 8.1 | 57 | 10.5 | 80.7 | 12 |
| 11/30/2016 | 0.673 | 0.953 | 21.5 | 0 | 23.8 | 0 | 69.2 | 11 |
| 12/31/2016 | 0.717 | 1.024 | 44.3 | 6.8 | 80.3 | 12 | 108.2 | 16 |
| 1/31/2017 | 0.796 | 1.073 | 20.6 | 0 | 57.5 | 7.5 | 62.4 | 8 |
| 2/28/2017 | 0.781 | 1.225 | 10.6 | 0 | 36.4 | 5.5 | 37.8 | 6 |
| 3/31/2017 | 0.838 | 1.121 | 58.6 | 7.4 | 79.2 | 9 | 112.2 | 12 |
| 4/30/2017 | 0.966 | 1.377 | 72.4 | 7.6 | 133.7 | 14.5 | 198.8 | 21 |
| 5/31/2017 | 0.884 | 1.117 | 73.9 | 9.7 | 68.3 | 9.5 | 197.6 | 24 |
| 6/30/2017 | 0.761 | 0.978 | 179.3 | 25.8 | 311.6 | 45.5 | 318.2 | 51 |
| 7/31/2017 | 0.631 | 0.764 | 22.2 | 0 | 50.2 | 7.5 | 49.7 | 8 |
| 8/31/2017 | 0.609 | 0.855 | 27.4 | 0 | 39.6 | 7 | 73.3 | 12 |
| 9/30/2017 | 0.584 | 0.763 | 17.3 | 0 | 43.4 | 8.5 | 48.5 | 11 |
| 10/31/2017 | 0.546 | 0.774 | 11.3 | 0 | 30.8 | 6 | 34.6 | 6 |
| 11/30/2017 | 0.612 | 0.75 | 5 | 0 | 24.8 | 4 | 49.6 | 8 |
| 12/31/2017 | 0.613 | 0.814 | 30.6 | 5.9 | 71.7 | 14.5 | 86.2 | 15 |
| 1/31/2018 | 0.671 | 0.88 | 78.6 | 13.5 | 91.2 | 19 | 159 | 23 |
| 2/28/2018 | 0.796 | 0.986 | 55.3 | 8.1 | 141.8 | 22 | 103.7 | 18 |
| 3/31/2018 | 0.845 | 1.065 | 108.7 | 15.1 | 121.2 | 16 | 140.9 | 17 |
| 4/30/2018 | 0.874 | 1.406 | 122.5 | 15.6 | 138.4 | 19 | 164.2 | 22 |
| 5/31/2018 | 0.769 | 0.958 | 119.5 | 18 | 156.2 | 21.5 | 174.9 | 24 |
| 6/30/2018 | 0.612 | 0.841 | 76.4 | 14.6 | 105.1 | 20 | 105.2 | 21 |
| 7/31/2018 | 0.597 | 0.77 | 104.9 | 19.6 | 127.2 | 22 | 155.5 | 25 |
| 8/31/2018 | 0.693 | 0.916 | 91.2 | 14.3 | 119.4 | 18.5 | 143.1 | 19 |
| 9/30/2018 | 0.792 | 1.555 | 82.6 | 11.8 | 120.1 | 14.5 | 138.4 | 18 |
| 10/31/2018 | 0.668 | 0.912 | 29.5 | 0 | 86.7 | 12.5 | 127.3 | 18 |

**Outfall 005 - DMR Data**

| Parameter | Flow | Flow | BOD5 | BOD5 | BOD5 | BOD5 | BOD5 | BOD5 |
|---|---|---|---|---|---|---|---|---|
| | Monthly Ave | Daily Max | Monthly Ave | Monthly Ave | Weekly Ave | Weekly Ave | Daily Max | Daily Max |
| Units | MGD | MGD | lb/d | mg/L | lb/d | mg/L | lb/d | mg/L |
| Effluent Limit | Report | Report | 300 | 30 | 450 | 45 | 500 | 50 |
| | | | | | | | | |
| 11/30/2018 | 0.893 | 1.262 | 41.2 | 0 | 67.5 | 8 | 71.5 | 8 |
| 12/31/2018 | 0.762 | 0.966 | 28.5 | 0 | 56.7 | 6 | 46.3 | 6 |
| 1/31/2019 | 0.742 | 0.994 | 29.5 | 0 | 46.5 | 6.3 | 81.4 | 12 |
| 2/28/2019 | 0.726 | 0.947 | 11.2 | 0 | 40.9 | 6.5 | 47.4 | 8 |
| 3/31/2019 | 0.701 | 0.947 | 25.9 | 0 | 50.2 | 7.5 | 55.3 | 8 |
| 4/30/2019 | 0.727 | 0.972 | 34 | 5.3 | 55.1 | 8 | 62.6 | 9 |
| 5/31/2019 | 0.736 | 0.919 | 43.6 | 6.4 | 61 | 8 | 76.6 | 10 |
| 6/30/2019 | 0.709 | 1.025 | 56.2 | 8.9 | 72.7 | 11 | 86 | 12 |
| 7/31/2019 | 0.663 | 0.923 | 38 | 6.2 | 45.8 | 7.5 | 53 | 9 |
| 8/31/2019 | 0.63 | 0.835 | 0 | 0 | 49.1 | 8 | 0 | 0 |
| 9/30/2019 | 0.577 | 0.748 | 32.7 | 5.7 | 40.6 | 7 | 42.9 | 7 |
| 10/31/2019 | 0.63 | 0.924 | 23.6 | 0 | 46.2 | 6.5 | 46.2 | 7 |
| 11/30/2019 | 0.642 | 0.827 | 16.9 | 2.8 | 22.7 | 3.5 | 45.4 | 7 |
| 12/31/2019 | 0.779 | 1.371 | 5.5 | 0.9 | 19.2 | 3 | 38.3 | 6 |
| 1/31/2020 | 0.759 | 0.962 | 69.9 | 10.2 | 140.8 | 20.5 | 201.2 | 30 |
| 2/29/2020 | 0.73 | 1.039 | 46.7 | 6.6 | 48.8 | 7 | 88 | 12 |
| 3/31/2020 | 0.781 | 1.042 | 74.1 | 11 | 94.9 | 12 | 130.1 | 16 |
| 4/30/2020 | 0.821 | 1.04 | 71.1 | 10.4 | 94.5 | 13 | 103.8 | 14 |
| 5/31/2020 | 0.682 | 0.947 | 48.7 | 8.4 | 60.1 | 10 | 80.2 | 12 |
| 6/30/2020 | 0.652 | 0.835 | 29.1 | 4.6 | 56.3 | 9 | 66.6 | 10 |
| 7/31/2020 | 0.671 | 1.148 | 43.8 | 8 | 55.2 | 9.5 | 62.9 | 10 |
| 8/31/2020 | 0.574 | 0.731 | 28.4 | 5.8 | 40.4 | 8 | 44.3 | 9 |
| 9/30/2020 | 0.547 | 0.735 | 49.8 | 10.5 | 71.3 | 15 | 80.3 | 18 |
| 10/31/2020 | 0.513 | 0.638 | 44.2 | 8.2 | 46.4 | 9 | 52.4 | 9 |
| 11/30/2020 | 0.65 | 0.839 | 46.9 | 8 | 60.4 | 9.3 | 62.7 | 11 |
| 12/31/2020 | 0.778 | 1.005 | 47.1 | 7.2 | 59.8 | 9.7 | 65.7 | 10 |
| 1/31/2021 | 0.739 | 1.031 | 38.7 | 6.3 | 56.3 | 8.7 | 59.4 | 9.3 |
| 2/28/2021 | 0.657 | 0.905 | 23 | 3.7 | 45.2 | 6.4 | 49.8 | 6.6 |

**Outfall 005 - DMR Data**

| Parameter | BOD5 | TSS | TSS | TSS | TSS | TSS | TSS | TSS |
|---|---|---|---|---|---|---|---|---|
| | Monthly Ave Min | Monthly Ave | Monthly Ave | Weekly Ave | Weekly Ave | Daily Max | Daily Max | Monthly Ave Min |
| Units | % | lb/d | mg/L | lb/d | mg/L | lb/d | mg/L | % |
| Effluent Limit | 85 | 300 | 30 | 450 | 45 | 500 | 50 | 85 |
| | | | | | | | | |
| Minimum | 93.6 | 10.2 | 0 | 16.9 | 2.5 | 27.1 | 4.9 | 91.4 |
| Maximum | 100 | 168.7 | 22.2 | 546.1 | 71.2 | 631.4 | 76.7 | 100 |
| Median | 97.9 | 61.1 | 9.25 | 80.55 | 11.6 | 86.8 | 13 | 97.95 |
| No. of Violations | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 |
| | | | | | | | | |
| 3/31/2016 | 99 | 44.6 | 6 | 49.4 | 6.6 | 80.8 | 11.4 | 98.7 |
| 4/30/2016 | 99.1 | 62.4 | 9 | 75 | 10.1 | 79.6 | 11.3 | 98.2 |
| 5/31/2016 | 99.3 | 24.9 | 4.2 | 41.1 | 6.7 | 53 | 8.3 | 99.3 |
| 6/30/2016 | 97.3 | 19 | 3.5 | 28.9 | 5.6 | 41.1 | 8.4 | 99.3 |
| 7/31/2016 | 97.7 | 15.2 | 2.8 | 19.6 | 3.9 | 27.1 | 4.9 | 99.6 |
| 8/31/2016 | 96 | 33.3 | 6.3 | 45.6 | 9 | 62.1 | 11.7 | 98.9 |
| 9/30/2016 | 97.6 | 30.6 | 5.4 | 47.6 | 8.5 | 64.8 | 10.3 | 99.2 |
| 10/31/2016 | 98.5 | 32.4 | 6.3 | 50.3 | 9.4 | 55.2 | 10 | 99 |
| 11/30/2016 | 100 | 10.2 | 0 | 16.9 | 2.5 | 30.8 | 4.9 | 100 |
| 12/31/2016 | 98.4 | 34.3 | 5.4 | 44.6 | 6.7 | 45.5 | 7 | 98.9 |
| 1/31/2017 | 100 | 36.7 | 5.1 | 38.9 | 5.4 | 42.1 | 5.7 | 98.7 |
| 2/28/2017 | 100 | 45.4 | 7.2 | 74.1 | 10.7 | 89.7 | 13.2 | 97.9 |
| 3/31/2017 | 97.9 | 80.8 | 10.5 | 97.3 | 11.1 | 115 | 12.8 | 97.8 |
| 4/30/2017 | 97.2 | 113 | 11.9 | 257.6 | 27.6 | 444.9 | 47 | 96.5 |
| 5/31/2017 | 97.1 | 168.7 | 22.2 | 148.7 | 20.7 | 631.4 | 76.7 | 94.6 |
| 6/30/2017 | 93.6 | 132.4 | 18.6 | 546.1 | 71.2 | 390.8 | 51.1 | 95.7 |
| 7/31/2017 | 100 | 27 | 5 | 76.4 | 11.8 | 36.4 | 7.1 | 98.6 |
| 8/31/2017 | 100 | 22.6 | 3.9 | 36.9 | 5.9 | 40.6 | 6 | 99.4 |
| 9/30/2017 | 100 | 24.8 | 4.8 | 31.8 | 6 | 33.6 | 6.6 | 99.3 |
| 10/31/2017 | 100 | 21.5 | 4.4 | 25.5 | 5.7 | 32.9 | 6.3 | 99.8 |
| 11/30/2017 | 100 | 23.7 | 4.4 | 43.3 | 8.5 | 49.5 | 9.4 | 98.8 |
| 12/31/2017 | 97.9 | 33.6 | 5.9 | 39.8 | 6.6 | 43.4 | 6.7 | 98.6 |
| 1/31/2018 | 95.8 | 21.5 | 3.7 | 23.6 | 5.1 | 58.8 | 8.5 | 98.7 |
| 2/28/2018 | 97.9 | 46.6 | 6.5 | 51 | 7.7 | 66.6 | 9.4 | 98 |
| 3/31/2018 | 95.6 | 56.5 | 7.9 | 80.1 | 11.2 | 85 | 11.6 | 97.1 |
| 4/30/2018 | 96.1 | 148.1 | 17.9 | 261.4 | 25.8 | 268.5 | 28.6 | 96.3 |
| 5/31/2018 | 96.3 | 91.3 | 13.1 | 177.7 | 24.5 | 183.7 | 25.2 | 98.7 |
| 6/30/2018 | 96.1 | 42.9 | 8.1 | 55.9 | 11 | 70.3 | 12.7 | 98.3 |
| 7/31/2018 | 94.9 | 43.9 | 8.3 | 54.8 | 10.6 | 63.1 | 11.9 | 97.3 |
| 8/31/2018 | 95.8 | 40.6 | 6.4 | 47.1 | 7 | 55.1 | 8.5 | 98.8 |
| 9/30/2018 | 97.3 | 54.7 | 7.9 | 73.1 | 9.9 | 85.8 | 12.4 | 98.8 |
| 10/31/2018 | 100 | 53.7 | 8.4 | 77.2 | 11.4 | 83.7 | 12.7 | 99.1 |

**Outfall 005 - DMR Data**

| Parameter | BOD5 | TSS | TSS | TSS | TSS | TSS | TSS | TSS |
|---|---|---|---|---|---|---|---|---|
| | Monthly Ave Min | Monthly Ave | Monthly Ave | Weekly Ave | Weekly Ave | Daily Max | Daily Max | Monthly Ave Min |
| Units | % | lb/d | mg/L | lb/d | mg/L | lb/d | mg/L | % |
| Effluent Limit | 85 | 300 | 30 | 450 | 45 | 500 | 50 | 85 |
| | | | | | | | | |
| 11/30/2018 | 100 | 81.5 | 9.8 | 130.1 | 15.5 | 134 | 15.9 | 97.9 |
| 12/31/2018 | 100 | 101.3 | 15.3 | 124.7 | 17.4 | 138.5 | 17.5 | 96.4 |
| 1/31/2019 | 100 | 73.5 | 11.1 | 92.3 | 12.2 | 129.5 | 17.5 | 95.7 |
| 2/28/2019 | 100 | 52.7 | 8.4 | 109.5 | 17.2 | 87.8 | 14.8 | 97.9 |
| 3/31/2019 | 100 | 78.3 | 12.6 | 89.2 | 14.6 | 98.7 | 14.9 | 96 |
| 4/30/2019 | 98.5 | 62.4 | 9.8 | 82.4 | 12 | 84.9 | 12.4 | 98 |
| 5/31/2019 | 98.7 | 61.6 | 9.2 | 67.3 | 9.6 | 78 | 14.2 | 98.9 |
| 6/30/2019 | 97.7 | 139.3 | 22 | 171.5 | 25.7 | 220.7 | 30.8 | 96.2 |
| 7/31/2019 | 98.5 | 60.6 | 9.5 | 86.9 | 13.3 | 102.1 | 13.5 | 99 |
| 8/31/2019 | 100 | 42.3 | 7.3 | 58.5 | 9.4 | 52.9 | 8.5 | 99.1 |
| 9/30/2019 | 98.7 | 93.3 | 16.5 | 132.2 | 22.9 | 136.5 | 23.4 | 97.7 |
| 10/31/2019 | 100 | 74.2 | 12.3 | 86.1 | 15.4 | 101 | 15.6 | 98.1 |
| 11/30/2019 | 99 | 85.9 | 14.5 | 110.8 | 19 | 129.4 | 19.2 | 95.8 |
| 12/31/2019 | 99.3 | 94.1 | 13.3 | 121.5 | 15 | 130.1 | 16.3 | 94.5 |
| 1/31/2020 | 96.2 | 116.2 | 16.8 | 127.3 | 18 | 152.4 | 19.1 | 94.5 |
| 2/29/2020 | 97.3 | 118.2 | 18.1 | 163.5 | 23.9 | 220.7 | 33 | 93.9 |
| 3/31/2020 | 97.2 | 115.1 | 17.2 | 154 | 19.8 | 161 | 19.8 | 96 |
| 4/30/2020 | 96.5 | 113.3 | 16.8 | 140.7 | 19.5 | 147.7 | 20.4 | 92.8 |
| 5/31/2020 | 96.7 | 93.8 | 17.3 | 117.2 | 21.2 | 118 | 22.1 | 95.6 |
| 6/30/2020 | 98.3 | 100.6 | 17.6 | 157.7 | 28.2 | 174.3 | 28.5 | 95.7 |
| 7/31/2020 | 96.9 | 111.3 | 19.8 | 152.8 | 26.9 | 186.6 | 31.2 | 96.7 |
| 8/31/2020 | 97.4 | 82.8 | 16.9 | 89 | 19 | 94.4 | 19.1 | 92.6 |
| 9/30/2020 | 96.9 | 91 | 18.9 | 131 | 27.2 | 140.1 | 27.3 | 92.1 |
| 10/31/2020 | 96.3 | 77.2 | 15 | 84.3 | 16.1 | 94.6 | 18 | 93.6 |
| 11/30/2020 | 96.3 | 88 | 15.1 | 101.1 | 16.6 | 101.7 | 19.4 | 91.6 |
| 12/31/2020 | 96.7 | 75.2 | 11.5 | 81 | 13.1 | 96.1 | 16.8 | 91.4 |
| 1/31/2021 | 97.3 | 58 | 9.3 | 69.4 | 10.7 | 73.9 | 11.4 | 95 |
| 2/28/2021 | 98.3 | 23.1 | 3.9 | 32.9 | 4.8 | 38.6 | 5.9 | 98.2 |

## Outfall 005 - DMR Data

| Parameter | pH | pH | Fecal Coliform | Fecal Coliform | Fecal Coliform | Fecal Coliform | TRC | TRC |
|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | MO GEOMN | WKLY GEO | Daily Max | Daily Max | Monthly Ave | Daily Max |
| Units | SU | SU | MPN/100mL | MPN/100mL | MPN/100mL | MPN/100mL | mg/L | mg/L |
| Effluent Limit | 6.5 | 8 | 14 | 14 | 14 | 43 | 0.75 | 1 |
| | | | | | | | | |
| Minimum | 6.7 | 7.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maximum | 7.6 | 7.8 | 5.2 | 9.9 | 118.7 | 118.7 | 0.05 | 1.47 |
| Median | 7.2 | 7.5 | 1.05 | 1.2 | 3 | 3 | 0 | 0 |
| No. of Violations | 0 | 0 | 0 | 0 | 11 | 5 | 0 | 1 |
| | | | | | | | | |
| 3/31/2016 | 6.9 | 7.3 | 1 | 1 | 1 | 1 | 0 | 0.07 |
| 4/30/2016 | 7 | 7.3 | 1 | 1 | 1 | 1 | 0 | 0.08 |
| 5/31/2016 | 6.8 | 7.3 | 1 | 1 | 1 | 1 | 0 | 0.07 |
| 6/30/2016 | 7.1 | 7.3 | 1 | 1 | 1 | 1 | 0 | 0 |
| 7/31/2016 | 7.2 | 7.6 | 1 | 1.2 | 3.1 | 3.1 | 0 | 0.35 |
| 8/31/2016 | 6.8 | 7.5 | 1.1 | 1.5 | 19.7 | 19.7 | 0 | 0.07 |
| 9/30/2016 | 6.7 | 7.5 | 1 | 1 | 1 | 1 | 0.05 | 1.47 |
| 10/31/2016 | 6.8 | 7.4 | 1 | 2 | 2 | 2 | 0 | 0 |
| 11/30/2016 | 7 | 7.5 | 1.1 | 1.4 | 12.1 | 12.1 | 0 | 0 |
| 12/31/2016 | 6.9 | 7.3 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1/31/2017 | 6.9 | 7.2 | 1 | 1 | 1 | 1 | 0 | 0 |
| 2/28/2017 | 6.9 | 7.4 | 1.1 | 1.1 | 2 | 2 | 0 | 0 |
| 3/31/2017 | 7.2 | 7.4 | 1.1 | 1.3 | 3.1 | 3.1 | 0 | 0 |
| 4/30/2017 | 6.9 | 7.4 | 1 | 1 | 1 | 1 | 0 | 0 |
| 5/31/2017 | 7.2 | 7.5 | 1.9 | 8.2 | 18.1 | 18.1 | 0 | 0.11 |
| 6/30/2017 | 7.2 | 7.8 | 1.7 | 6.7 | 43.5 | 43.5 | 0 | 0.05 |
| 7/31/2017 | 7.2 | 7.5 | 1.2 | 1.6 | 30.1 | 30.1 | 0 | 0 |
| 8/31/2017 | 7.1 | 7.5 | 1 | 1.1 | 2 | 2 | 0 | 0 |
| 9/30/2017 | 7.1 | 7.4 | 1.2 | 1.4 | 6.3 | 6.3 | 0 | 0 |
| 10/31/2017 | 7 | 7.3 | 1.3 | 2 | 12.2 | 12.2 | 0 | 0.35 |
| 11/30/2017 | 7 | 7.4 | 1 | 1.1 | 2 | 2 | 0 | 0.16 |
| 12/31/2017 | 7 | 7.3 | 1.1 | 1.3 | 3.1 | 3.1 | 0 | 0 |
| 1/31/2018 | 7.1 | 7.4 | 1.1 | 1.2 | 3 | 3 | 0 | 0 |
| 2/28/2018 | 7.2 | 7.5 | 1 | 1.1 | 2 | 2 | 0 | 0 |
| 3/31/2018 | 7.2 | 7.5 | 2.1 | 3.2 | 7.4 | 7.4 | 0 | 0 |
| 4/30/2018 | 7.1 | 7.6 | 5.2 | 8.1 | 36.9 | 36.9 | 0 | 0 |
| 5/31/2018 | 7.3 | 7.6 | 2.6 | 7.1 | 30.1 | 30.1 | 0 | 0.15 |
| 6/30/2018 | 7.3 | 7.6 | 1.3 | 1.8 | 13.4 | 13.4 | 0 | 0 |
| 7/31/2018 | 7.2 | 7.6 | 1.3 | 2.3 | 62.7 | 62.7 | 0 | 0.51 |
| 8/31/2018 | 7.2 | 7.6 | 1.1 | 1.2 | 3.1 | 3.1 | 0 | 0.35 |
| 9/30/2018 | 7.1 | 7.4 | 1 | 1.2 | 2 | 2 | 0 | 0 |
| 10/31/2018 | 7.1 | 7.3 | 1.1 | 1.2 | 4.1 | 4.1 | 0 | 0 |

**Outfall 005 - DMR Data**

| Parameter | pH | pH | Fecal Coliform | Fecal Coliform | Fecal Coliform | Fecal Coliform | TRC | TRC |
|---|---|---|---|---|---|---|---|---|
| | Minimum | Maximum | MO GEOMN | WKLY GEO | Daily Max | Daily Max | Monthly Ave | Daily Max |
| Units | SU | SU | MPN/100mL | MPN/100mL | MPN/100mL | MPN/100mL | mg/L | mg/L |
| **Effluent Limit** | **6.5** | **8** | **14** | **14** | **14** | **43** | **0.75** | **1** |
| | | | | | | | | |
| 11/30/2018 | 7 | 7.4 | 1.6 | 3.6 | 10.9 | 10.9 | 0 | 0 |
| 12/31/2018 | 7.1 | 7.4 | 1.2 | 1.5 | 3.1 | 3.1 | 0 | 0 |
| 1/31/2019 | 7.1 | 7.4 | 1 | 1.1 | 2 | 2 | 0 | 0 |
| 2/28/2019 | 7.1 | 7.5 | 1 | 1 | 2 | 2 | 0 | 0 |
| 3/31/2019 | 7.1 | 7.4 | 1 | 1 | 1 | 1 | 0.01 | 0.32 |
| 4/30/2019 | 7.2 | 7.4 | 1 | 1.2 | 3.1 | 3.1 | 0 | 0 |
| 5/31/2019 | 7.2 | 7.6 | 1 | 1 | 1 | 1 | 0 | 0 |
| 6/30/2019 | 7.2 | 7.6 | 1.1 | 3.1 | 3.1 | 3.1 | 0 | 0 |
| 7/31/2019 | 7.3 | 7.5 | 1.2 | 1.4 | 3.1 | 3.1 | 0 | 0.38 |
| 8/31/2019 | 7.2 | 7.5 | 1.2 | 2 | **118.7** | **118.7** | 0 | 0 |
| 9/30/2019 | 7.3 | 7.6 | 1 | 1.1 | 2 | 2 | 0 | 0 |
| 10/31/2019 | 7.2 | 7.5 | 1.2 | 1.9 | **88.2** | **88.2** | 0.01 | 0.12 |
| 11/30/2019 | 7.2 | 7.4 | 1 | 1.2 | 3 | 3 | 0 | 0 |
| 12/31/2019 | 7 | 7.4 | 1 | 1.1 | 2 | 2 | 0.02 | 0.41 |
| 1/31/2020 | 7.1 | 7.4 | 1 | 1.1 | 2 | 2 | 0 | 0.06 |
| 2/29/2020 | 7.2 | 7.5 | 1 | 1 | 1 | 1 | 0.01 | 0.14 |
| 3/31/2020 | 7.2 | 7.5 | 1 | 1 | 1 | 1 | 0 | 0.07 |
| 4/30/2020 | 7.2 | 7.4 | 1 | 1 | 1 | 1 | 0 | 0 |
| 5/31/2020 | 7.2 | 7.6 | 1 | 1 | 1 | 1 | 0 | 0 |
| 6/30/2020 | 7.4 | 7.6 | 1 | 1 | 1 | 1 | 0 | 0 |
| 7/31/2020 | 7.3 | 7.7 | 1.2 | 2 | 7 | 7 | 0 | 0 |
| 8/31/2020 | 7.3 | 7.5 | 1.1 | 1.5 | **14.6** | 14.6 | 0 | 0 |
| 9/30/2020 | 7.3 | 7.5 | 1.3 | 2 | 12 | 12 | 0 | 0.1 |
| 10/31/2020 | 7.6 | 7.4 | 1 | 1.3 | 2 | 2 | 0 | 0 |
| 11/30/2020 | 7.4 | 7.6 | 1.3 | 9.9 | **98.2** | **98.2** | 0 | 0 |
| 12/31/2020 | 7.3 | 7.5 | 1.1 | 1.1 | 2 | 2 | 0 | 0 |
| 1/31/2021 | 7.2 | 7.6 | 1.1 | 1.3 | 3.1 | 3.1 | 0 | 0 |
| 2/28/2021 | 7.2 | 7.6 | < 1 | < 1 | < 1 | < 1 | 0 | 0 |

**Outfall 005 - Effluent WET Data**

| Parameter | LC50 Acute Menidia | Ammonia | Aluminum | Cadmium | Chromium, total recoverable | Copper | Nickel | Lead |
|---|---|---|---|---|---|---|---|---|
| | Daily Min | Daily Max | Daily Max | Daily Max | Daily Max | Daily Max | Daily Max | Daily Max |
| Units | % | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Effluent Limit | 50 | Report | Report | Report | Report | Report | Report | Report |
| | | | | | | | | |
| Minimum | 50 | 0.2 | 0 | 0 | 0 | 0.006 | 0 | 0 |
| Maximum | 100 | 7.49 | 0.091 | 0.0002 | 0.002 | 0.027 | 0.01 | 0.0006 |
| Median | 100 | 3.68 | 0.05 | Non-Detect | 0.001 | 0.01365 | 0.0055 | Non-Detect |
| No. of Violations | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | | | | | | | |
| 6/30/2016 | 100 | 4.48 | 0.077 | <0.001 | 0.002 | 0.006 | 0.004 | <0.0003 |
| 9/30/2016 | 94 | 4.05 | 0.035 | <0.001 | 0.002 | 0.006 | <0.001 | 0.0003 |
| 6/30/2017 | 100 | 3.2 | <0.005 | <0.0001 | 0.001 | 0.006 | 0.004 | 0.0006 |
| 9/30/2017 | 100 | 0.2 | 0.091 | <0.0004 | 0.001 | 0.02 | 0.01 | <0.0003 |
| 6/30/2018 | 100 | 7.49 | 0.083 | 0.0002 | 0.001 | 0.0189 | 0.004 | <0.0003 |
| 9/30/2018 | 50 | 3.15 | 0.062 | <0.0001 | 0.001 | 0.0142 | 0.006 | <0.0003 |
| 6/30/2019 | 100 | 3.36 | 0.05 | <0.0001 | 0.001 | 0.0121 | 0.006 | <0.0003 |
| 9/30/2019 | 100 | 4.03 | 0.05 | < 0.0001 | 0.001 | 0.027 | 0.005 | <0.0003 |
| 6/30/2020 | 100 | 3.56 | 0.048 | < 0.0001 | < 0.001 | 0.0131 | 0.009 | < 0.0003 |
| 9/30/2020 | 100 | 3.8 | 0.039 | < 0.0001 | 0.002 | 0.0215 | 0.01 | < 0.0003 |

NA = Not analyzed

**Outfall 005 - Effluent WET Data**

| Parameter | Zinc | Trichloroethylene | LC50 Static 48Hr Acute Mysid. Bahia |
|---|---|---|---|
| | Daily Max | Daily Max | Daily Min |
| Units | mg/L | mg/L | % |
| Effluent Limit | Report | Report | 50 |
| | | | |
| Minimum | 0.055 | 0 | 100 |
| Maximum | 0.102 | 0.0023 | 100 |
| Median | 0.0675 | Non-Detect | 100 |
| No. of Violations | N/A | N/A | 0 |
| | | | |
| 6/30/2016 | 0.057 | <0.001 | 100 |
| 9/30/2016 | 0.055 | <0.001 | 100 |
| 6/30/2017 | 0.058 | <0.001 | 100 |
| 9/30/2017 | 0.097 | NA | 100 |
| 6/30/2018 | 0.066 | <0.001 | 100 |
| 9/30/2018 | 0.069 | <0.001 | 100 |
| 6/30/2019 | 0.081 | <0.001 | 100 |
| 9/30/2019 | 0.085 | 0.0023 | 100 |
| 6/30/2020 | 0.063 | < 0.001 | 100 |
| 9/30/2020 | 0.102 | <0.001 | 100 |

NA = Not analyzed

**Outfall 005 - Ambient WET Data**

| Parameter | Ammonia | pH | Alkalinity-$CaCO_3$ | Salinity | Total Organic Carbon | Total Suspended Solids |
|---|---|---|---|---|---|---|
| | Daily Max | Daily Max | Daily Max | Daily Max | Daily Max | Daily Max |
| Units | mg/L | S.U. | mg/L | ppt | mg/L | mg/L |
| Effluent Limit | Report | Report | Report | Report | Report | Report |
| | | | | | | |
| **Minimum** | **0.00** | **7.7** | **82.1** | **1.5** | **0.5** | **0.0** |
| **Maximum** | **0.36** | **8.0** | **112.0** | **33.0** | **3.4** | **36.0** |
| **Average** | **0.10** | **7.8** | **99.7** | **22.5** | **2.3** | **15.7** |
| **Median** | **0.08** | **7.8** | **103.5** | **26.1** | **2.4** | **17.0** |
| | | | | | | |
| 5/1/2016 | 0.13 | 7.84 | 102 | 1.5 | 1.90 | 0 |
| 8/1/2016 | 0.15 | 7.90 | 111 | 33.0 | 1.90 | 28 |
| 5/1/2017 | 0.00 | 7.78 | 88 | 23.8 | 2.68 | 20 |
| 8/1/2017 | 0.08 | 7.80 | 112 | 30.4 | 2.12 | 29 |
| 5/1/2018 | 0.36 | 7.77 | 82 | 23.7 | 3.34 | 5 |
| 8/1/2018 | 0.08 | 7.83 | 106 | 28.6 | 2.47 | 0 |
| 5/1/2019 | 0.16 | 7.71 | 84 | 20.0 | 3.38 | 0 |
| 8/1/2019 | 0.00 | 7.85 | 105 | 3.8 | 0.50 | 36 |
| 5/1/2020 | 0.00 | 7.80 | 101 | 28.4 | 2.69 | 14 |
| 8/1/2020 | 0.00 | 7.99 | 106 | 31.6 | 2.25 | 25 |

**Outfall 005 - Ambient WET Data**

| Parameter | Total Solids |
|---|---|
| | Daily Max |
| Units | mg/L |
| Effluent Limit | Report |
| | |
| Minimum | 23000 |
| Maximum | 39000 |
| Average | 30900 |
| Median | 31000 |
| | |
| 5/1/2016 | 31000 |
| 8/1/2016 | 29000 |
| 5/1/2017 | 26000 |
| 8/1/2017 | 33000 |
| 5/1/2018 | 28000 |
| 8/1/2018 | 32000 |
| 5/1/2019 | 23000 |
| 8/1/2019 | 37000 |
| 5/1/2020 | 31000 |
| 8/1/2020 | 39000 |

```
CORMIX2 PREDICTION FILE:
2222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222
                  CORMIX MIXING ZONE EXPERT SYSTEM
               Subsystem CORMIX2: Multiport Diffuser Discharges
                          CORMIX Version 11.0GTD
                     HYDRO2 Version 11.0.1.0 August 2019
-------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------
CASE DESCRIPTION
 Site name/label:   Pease
 Design case:       Pease Outfall Design
 FILE NAME:         S:\...seOutfallDesign\Pease Outfall Design 1.77 MGD.prd
 Time stamp:        01/09/2020--13:15:04

ENVIRONMENT PARAMETERS (metric units)
 Unbounded section
 HA    =      6.07  HD    =      6.06
 Tidal Simulation at TIME =     -0.250 h
 PERIOD=    12.40 h UAmax =      2.060 dUa/dt=      0.320 (m/s)/h
 UA    =      0.080 F     =      0.027 USTAR =0.4639E-02
 UW    =      2.000 UWSTAR=0.2198E-02
 Uniform density environment
 STRCND=  U         RHOAM = 1020.0000

DIFFUSER DISCHARGE PARAMETERS (metric units)
 Diffuser type:     DITYPE= unidirectional_perpendicular
 BANK  =  RIGHT     DISTB =     90.19  YB1   =     73.14  YB2   =    107.24
 LD    =     34.10  NOPEN =    8       NRISER=    8       SPAC  =      4.87    NPPERR =    1
 D0    =      0.059 A0    =      0.003 H0    =      0.60  SUB0  =      5.46
 D0INP =      0.059 CR0   =      1.000 B0    =0.5631E-03
 Nozzle/port arrangement:   unidirectional_without_fanning
 GAMMA =     90.00  THETA =     45.00  SIGMA =      0.00  BETA  =     90.00
 U0    =      3.534 Q0    =      0.078 Q0A   =0.7755E-01
 RHO0  =  998.0000  DRHO0 =0.2200E+02  GP0   =0.2115E+00
 C0    =0.1000E+03  CUNITS=  %
 IPOLL =  1         KS    =0.0000E+00  KD    =0.0000E+00

FLUX VARIABLES - PER UNIT DIFFUSER LENGTH (metric units)
 q0    =0.2274E-02         SIGNJ0=      1.0
 m0 =U0^2*B0 =0.7031E-02   j0 =U0*GP0*B0 =0.4209E-03   (based on slot width B0)
 m0 =U0*q0   =0.8036E-02   j0 =q0*GP0    =0.4810E-03   (based on volume flux q0)
 Associated 2-d length scales (meters)
 lQ=B  =      0.001 lM    =      1.25  lm    =      1.26
 lmp   =  99999.00  lbp   =  99999.00  la    =  99999.00

FLUX VARIABLES - ENTIRE DIFFUSER (metric units)
 Q0    =0.7755E-01  M0    =0.2398E+00  J0    =0.1435E-01
 Associated 3-d length scales (meters)
 LQ    =      0.05  LM    =      2.86  Lm    =      6.54  Lb    =     32.04
                                      Lmp   =  99999.00  Lbp   =  99999.00
 Tidal:             Tu    =   0.1124 h Lu    =     14.554 Lmin  =      0.254
 Tidal Cutoffs (m): lmax  =    67.617  xmax  =   892.800  ymax  =   196.473

NON-DIMENSIONAL PARAMETERS
 FR0   =    323.77  FRD0  =     31.60  R     =     44.17  PL    =  180.35
 (slot)             (port/nozzle)

RECOMPUTED SOURCE CONDITIONS FOR RISER GROUPS:
 Properties of riser group with  1 ports/nozzles each:
 U0    =      3.534 D0    =      0.059 A0    =      0.003 THETA =     45.00
 FR0   =    323.77  FRD0  =     31.60  R     =     44.17
 (slot)             (riser group)

FLOW CLASSIFICATION
 22222222222222222222222222222222222222222222222
 2  Flow class (CORMIX2)      =    MU2          2
 2  Applicable layer depth HS =     6.06        2
 22222222222222222222222222222222222222222222222

MIXING ZONE / TOXIC DILUTION / REGION OF INTEREST PARAMETERS
 C0    =0.1000E+03  CUNITS=  %
 NTOX  =  0
 NSTD  =  0
 REGMZ =  1
 REGSPC=  1         XREG  =    152.00  WREG  =      0.00  AREG  =      0.00
 XINT  =    607.00  XMAX  =    607.00

X-Y-Z COORDINATE SYSTEM:
    ORIGIN is located at the bottom and the diffuser mid-point:
        90.19 m  from the RIGHT bank/shore.
    X-axis points downstream, Y-axis points to left, Z-axis points upward.
NSTEP =  10 display intervals per module
-------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------
BEGIN MOD201: DIFFUSER DISCHARGE MODULE

 Due to complex near-field motions:  EQUIVALENT SLOT DIFFUSER (2-D) GEOMETRY

 Profile definitions:
   BV = Gaussian 1/e (37%) half-width, in vertical plane normal to trajectory
```

```
   BH = top-hat half-width, in horizontal plane normal to trajectory
   S  = hydrodynamic centerline dilution
   C  = centerline concentration (includes reaction effects, if any)
   Uc = Local centerline excess velocity (above ambient)
   TT = Cumulative travel time

      X        Y       Z        S       C       BV       BH       Uc        TT
    0.00     0.00    0.60     1.0 0.100E+03   0.00    17.05     3.477   .00000E+00

END OF MOD201: DIFFUSER DISCHARGE MODULE
------------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------------
BEGIN MOD271: ACCELERATION ZONE OF UNIDIRECTIONAL CO-FLOWING DIFFUSER

 In this laterally contracting zone the diffuser plume becomes VERTICALLY FULLY
  MIXED over the entire layer depth (HS =    6.06m).
   Full mixing is achieved after a plume distance of about five
   layer depths from the diffuser.

 Profile definitions:
   BV = layer depth (vertically mixed)
   BH = top-hat half-width, in horizontal plane normal to trajectory
   S  = hydrodynamic average (bulk) dilution
   C  = average (bulk) concentration (includes reaction effects, if any)
   TT = Cumulative travel time

      X        Y       Z        S       C       BV       BH        TT
    0.00     0.00    0.60     1.0 0.100E+03   0.00    17.05 .00000E+00
    1.70     0.00    0.74    72.7 0.138E+01   0.61    16.69 .13259E+02
    3.41     0.00    0.87   102.4 0.977E+00   1.21    16.42 .29782E+02
    5.11     0.00    1.01   125.2 0.799E+00   1.82    16.21 .47265E+02
    6.82     0.00    1.15   144.4 0.693E+00   2.42    16.05 .65285E+02
    8.52     0.00    1.28   161.3 0.620E+00   3.03    15.92 .83662E+02
   10.23     0.00    1.42   176.6 0.566E+00   3.64    15.82 .10230E+03
   11.93     0.00    1.56   190.6 0.525E+00   4.24    15.75 .12114E+03
   13.64     0.00    1.69   203.7 0.491E+00   4.85    15.70 .14014E+03
   15.34     0.00    1.83   216.0 0.463E+00   5.45    15.68 .15927E+03
   17.05     0.00    1.97   227.6 0.439E+00   6.06    15.67 .17851E+03
 Cumulative travel time =         178.5110 sec  (    0.05 hrs)
   Plume centerline may exhibit slight discontinuities in transition
     to subsequent far-field module.

END OF MOD271: ACCELERATION ZONE OF UNIDIRECTIONAL CO-FLOWING DIFFUSER
------------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------------
BEGIN MOD251: DIFFUSER PLUME IN CO-FLOW

 Phase 1: Vertically mixed, Phase 2: Re-stratified

------------------------------------------------------------------------------------------------
 Phase 2: The flow has RESTRATIFIED at the beginning of this zone.

 This flow region is INSIGNIFICANT in spatial extent and will be by-passed.

END OF MOD251: DIFFUSER PLUME IN CO-FLOW
------------------------------------------------------------------------------------------------
** End of NEAR-FIELD REGION (NFR) **

 The initial plume WIDTH values in the next far-field module will be
  CORRECTED by a factor  1.16 to conserve the mass flux in the far-field!
------------------------------------------------------------------------------------------------
BEGIN MOD241: BUOYANT AMBIENT SPREADING

 Profile definitions:
   BV = top-hat thickness, measured vertically
   BH = top-hat half-width, measured horizontally in y-direction
   ZU = upper plume boundary (Z-coordinate)
   ZL = lower plume boundary (Z-coordinate)
   S  = hydrodynamic average (bulk) dilution
   C  = average (bulk) concentration (includes reaction effects, if any)
   TT = Cumulative travel time

 Plume Stage 1 (not bank attached):
      X        Y       Z        S       C       BV       BH      ZU      ZL       TT
   17.05     0.00    6.06   227.6 0.439E+00   6.06    18.22    6.06    0.00   .17851E+03
   35.55     0.00    6.06   255.5 0.391E+00   4.28    29.00    6.06    1.78   .40979E+03
   54.06     0.00    6.06   273.3 0.366E+00   3.49    38.03    6.06    2.57   .64107E+03
   67.34     0.00    6.06   282.9 0.354E+00   3.16    43.80    6.06    2.90   .80708E+03
 Cumulative travel time =         807.0792 sec  (    0.22 hrs)

 CORMIX simulation has been TERMINATED at last prediction interval.
   Limiting distance (lmax) due to TIDAL REVERSAL has been reached.

END OF MOD241: BUOYANT AMBIENT SPREADING
------------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------------
CORMIX2: Multiport Diffuser Discharges       End of Prediction File
2222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222222
```

A reasonable potential analysis is completed using a single set of critical conditions for flow and pollutant concentration that will ensure the protection of water quality standards. To determine the critical condition of the effluent, EPA projects an upper bound of the effluent concentration based on the observed monitoring data and a selected probability basis. EPA generally applies the quantitative approach found in Appendix E of EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD)[1] to determine the upper bound of the effluent data. This methodology accounts for effluent variability based on the size of the dataset and the occurrence of non-detects (i.e., samples results in which a parameter is not detected above laboratory detection limits). For datasets of 10 or more samples, EPA uses the upper bound effluent concentration at the 95$^{th}$ percentile of the dataset. For datasets of less than 10 samples, EPA uses the maximum value of the dataset.

EPA uses the calculated upper bound of the effluent data, along with a concentration representative of the parameter in the receiving water, the critical effluent flow, and the critical upstream flow to project the downstream concentration after complete mixing using the following simple mass-balance equation:

$$C_s Q_s + C_e Q_e = C_d Q_d$$

Where:

$C_s$ = upstream concentration (median value of available ambient data)
$Q_s$ = upstream flow (7Q10 flow upstream of the outfall)
$C_e$ = effluent concentration (95$^{th}$ percentile or maximum of effluent concentration)
$Q_e$ = effluent flow of the facility (design flow)
$C_d$ = downstream concentration
$Q_d$ = downstream flow ($Q_s + Q_e$)

Solving for the downstream concentration results in:

$$C_d = \frac{C_s Q_s + C_e Q_e}{Q_d}$$

When both the downstream concentration ($C_d$) and the effluent concentration ($C_e$) exceed the applicable criterion, there is reasonable potential for the discharge to cause, or contribute to an excursion above the water quality standard. *See* 40 C.F.R. § 122.44(d). When EPA determines that a discharge causes, has the reasonable potential to cause, or contribute to such an excursion, the permit must

contain WQBELs for the parameter. *See* 40 C.F.R. § 122.44(d)(1)(iii). Limits are calculated by using the criterion as the downstream concentration ($C_d$) and rearranging the mass balance equation to solve for the effluent concentration ($C_e$). The table below presents the reasonable potential calculations and, if applicable, the calculation of the limits required in the permit. Refer to the pollutant-specific section of the Fact Sheet for a detailed discussion of these calculations, any assumptions that were made and the resulting permit requirements.

| Pollutant | DF | $C_s$ [1] | $C_e$ [2] | | $C_d$ | | Criteria * 0.9 | | Reasonable Potential | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -- | mg/L | Acute (mg/L) | Chronic (mg/L) | Acute (mg/L) | Chronic (mg/L) | Acute (mg/L) | Chronic (mg/L) | $C_d$ & $C_r$ > Acute Criteria | $C_d$ & $C_r$ > Chronic Criteria | Acute (mg/L) | Chronic (mg/L) |
| Ammonia (Warm) | | 0.1 | 14.8 | 14.8 | 0.2 | 0.2 | 7.0 | 1.0 | N | N | N/A | N/A |
| Ammonia (Cold) | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.0 | 4.4 | N | N | N/A | N/A |
| | | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | | | µg/L | µg/L |
| Cadmium | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 36.2 | 8.0 | N | N | N/A | N/A |
| Copper | | 0.0 | 32.2 | 32.2 | 0.3 | 0.3 | 5.2 | 3.4 | N | N | N/A | N/A |
| Lead | | 0.0 | 0.6 | 0.6 | 0.0 | 0.0 | 198.7 | 7.7 | N | N | N/A | N/A |
| Nickel | | 0.0 | 11.2 | 11.2 | 0.1 | 0.1 | 67.3 | 7.5 | N | N | N/A | N/A |
| Zinc | | 0.0 | 103.6 | 103.6 | 1.0 | 1.0 | 85.6 | 77.1 | N | N | N/A | N/A |

[1]Median concentration for the receiving water upstream of the zone of influence of the facility's discharge taken from the WET testing data during the review period (see Appendix A).

[2]Values represent the 95$^{th}$ percentile (for $n \geq 10$) or maximum (for $n < 10$) concentrations from the DMR data and/or WET testing data during the review period (see Appendix A).

U.S. ENVIRONMENTAL PROTECTION AGENCY-REGION 1
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WATER DIVISION
P.O. BOX 95
CONCORD, NEW HAMPSHIRE 03302-0095

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTIONS 301 AND 402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT, AND ISSUANCE OF A STATE SURFACE WATER PERMIT UNDER NH RSA 485-A:13, I(a).

PUBLIC NOTICE PERIOD: March 31, 2022 – April 29, 2022

PERMIT NUMBER: **NH0090000**

NAME AND MAILING ADDRESS OF APPLICANT:

City of Portsmouth
680 Peverly Hill Road
Portsmouth, NH 03801

NAME AND LOCATION OF FACILITY WHERE DISCHARGE OCCURS:

Pease Wastewater Treatment Facility
135 Corporate Drive
Portsmouth, NH 03801

RECEIVING WATER: Piscataqua River - Class B

PREPRATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) have cooperated in the development of a draft permit for the Pease Wastewater Treatment Facility, which discharges treated industrial, domestic, and commercial wastewater. Sludge from this facility is pumped to sludge disposal lagoons for burial at Turnkey Landfill. The effluent limits and permit conditions imposed have been drafted to assure compliance with the Clean Water Act, 33 U.S.C. sections 1251 et seq., Chapter 485-A of the New Hampshire Statutes: Water Pollution and Waste Disposal, and the New Hampshire Surface Water Quality Regulations, Env-Wq 1700 et seq. EPA has formally requested that the State certify the draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE DRAFT PERMIT:

The Draft Permit and explanatory Fact Sheet may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_nh.html or by contacting:

Meridith Finegan
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1533
Email: finegan.meridith@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 REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of the draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **April 29, 2022**, to the address or email address listed above. Any person, prior to such date, may submit a request in writing to EPA and NHDES for a public hearing to consider this draft permit. 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 whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these 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
U.S. ENVIRONMENTAL PROTECTION AGENCY - REGION 1

RENE PELLETIER, DIRECTOR
WATER DIVISION
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES