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"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§ 26-53),

Town of Rockport, Massachusetts

is authorized to discharge from the facility located at

Rockport Wastewater Treatment Facility
46 Pleasant Street
Rockport, MA 01966

to receiving water named

Sandy Bay (MA93-57)

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.

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 February 7, 2011.

This permit consists of the cover page(s), **Part I**, **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012) and **Part II (**NPDES Part II Standard Conditions, April 2018).

Signed this 19th day of May, 2020

/S/SIGNATURE ON FILE
Ken Moraff, Director
Water Division
Environmental Protection Agency
Region 1
Boston, MA

/S/SIGNATURE ON FILE
Lealdon Langley, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge treated effluent through Outfall Serial Number 001 to Sandy Bay. 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]
Effluent Flow[5]	0.8 MGD Rolling Average	---	---	Continuous	Recorder
Effluent Flow[5]	Report MGD	---	Report MGD	Continuous	Recorder
BOD_5	30 mg/L 200 lb/day	45 mg/L 300 lb/day	Report mg/L	1/week	Composite
BOD_5 Removal	≥ 85 %	---	---	---	---
TSS	30 mg/L 200 lb/day	45 mg/L 300 lb/day	Report mg/L	1/week	Composite
TSS Removal	≥ 85 %	---	---	---	---
pH Range[6]	6.5 - 8.5 S.U.			1/day	Grab
Total Residual Chlorine[7,8,9]	0.18 mg/L	---	0.31 mg/L	3/day	Grab
Fecal coliform[8,10]	88 organisms/ 100 mL	---	260 organisms/ 100 mL	2/week	Grab
Eneterococci [8,10]	35 colonies/ 100 mL	---	276 colonies/ 100 mL	2/week	Grab
Total Copper[11]	90 µg/L	---	---	1/month	Composite
Total Nitrogen[12]	Report mg/L Report lb/day	---	Report mg/L	1/month	Composite
Total Kjeldahl Nitrogen	Report mg/L	---	Report mg/L	1/month	Composite
Total Nitrate + Nitrite	Report mg/L	---	Report mg/L	1/month	Composite

Effluent Characteristic	Effluent Limitation			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Whole Effluent Toxicity (WET) Testing[13,14]					
LC_{50}	---	---	≥ 100 %	2/year	Composite
Salinity	---	---	Report ppt	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

Ambient Characteristic[15]	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Salinity	---	---	Report ppt	2/year	Grab
Ammonia Nitrogen	---	---	Report mg/L	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
pH[16]	---	---	Report S.U.	2/year	Grab
Temperature[16]	---	---	Report °C	2/year	Grab

Influent Characteristic	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
BOD_5	Report mg/L	---	---	2/month	Composite
TSS	Report mg/L	---	---	2/month	Composite

Footnotes:

1. Effluent samples shall yield data representative of the discharge. 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. 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 C.F.R. Part 136.

2. In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. 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 C.F.R. Part 136 or required under 40 C.F.R. 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" for all non-detects for that reporting period and report the average of all the results.

4. Each composite sample will consist of at least twenty-four (24) grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportional to flow.

5. Report annual average, monthly average, and the maximum daily flow in million gallons per day (MGD). The limit is an annual average, which shall be reported as a rolling average. The value 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.

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.).

7. See Part I.G.4 below for TRC compliance schedule and interim limits.

8. 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.

   The Permittee may simulate the chlorine contact time in the outfall pipe prior to discharge into Sandy Bay by holding effluent samples in conditions similar to those that would be present at the outfall pipe, 001 before measuring TRC, enterococci and fecal coliform.

   The holding time shall be calculated based on effluent flow at the time of sample collection and length of the outfall pipe to determine the amount of time required for wastewater to pass between the point of collection and the outfall. The holding time and supporting calculations shall be submitted as an attachment to the monthly DMRs. The following formula is to be used to calculate the holding time:

   > Contact time (in minutes) = [Volume of the outfall pipe (in million gallons)] / [effluent flow at time of sample collection (in MGD)] * 1440 minutes/day

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

10. *Enterococci* and Fecal Coliform monitoring shall be conducted concurrently with TRC monitoring, if TRC monitoring is required. The monthly average limit for Fecal Coliform is expressed as a geometric mean. For samples tested using the Most Probable Number (MPN) method, the units may be expressed as MPN. The units may also be espressed as colony forming units (cfu) when using the Membrane Filtration method.

11. See Part I.G.5 below for total copper compliance schedule and interim monitoring requirement.

12. Total Nitrogen shall be calculated as the sum of Total Kjeldahl Nitrogen and Total Nitrate + Nitrite.

13. 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 (*Menidia beryllina*). Toxicity test samples shall be collected and tests completed during the same weeks each time of calendar quarters ending March 31st, and September 30th. The complete report for each toxicity test shall be submitted as an attachment to the monthly DMR submittal immediately following the completion of the test.

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

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

16. 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.

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

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

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

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

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

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

    a. Any new introduction of pollutants into the Publicly-Owned Treatment Works (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 C.F.R. Part 122 Appendix A as amended) discharging process water; and

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

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

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

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

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

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 in accordance with Part II.D.1.e.(1) (24-hour reporting). See Part I.H below for reporting requirements.

2. Starting December 21, 2020, the Permittee must provide notification to the public within 24 hours of any unauthorized discharge on a publicly available web site. Such notification shall include the location 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.

3. Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes MassDEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at https://www.mass.gov/how-to/sanitary-sewer-overflowbypassbackup-notification.

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, and the direction of flow. If certain information is determined to be infeasible to obtain, a justification must be provided 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 31st 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

f. If the average annual flow in the previous calendar year exceeded 80 percent of the facility's 0.8 MGD design flow (0.64 MGD), or there have been capacity related overflows, the report shall include:

(1) Plans for further potential flow increases describing how the Permittee will maintain compliance with the flow limit and all other effluent limitations and conditions; and
(2) A calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year.

D. ALTERNATE POWER SOURCE

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

E. INDUSTRIAL USERS

1. The Permittee shall submit to EPA and the State the name of any Industrial User (IU) subject to Categorical Pretreatment Standards under 40 C.F.R. § 403.6 and 40 C.F.R. chapter I, subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended) who commences discharge to the POTW after the effective date of this permit.

   This reporting requirement also applies to any other IU who discharges an average of 25,000 gallons per day or more of process wastewater into the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW; or is designated as such by the Control Authority as defined in 40 C.F.R. § 403.12(a) on the basis that the industrial user has a reasonable potential to adversely affect the wastewater treatment facility's operation, or for

violating any pretreatment standard or requirement (in accordance with 40 C.F.R. § 403.8(f)(6)).

2. In the event that the Permittee receives reports (baseline monitoring reports, 90-day compliance reports, periodic reports on continued compliance, etc.) from industrial users subject to Categorical Pretreatment Standards under 40 C.F.R. § 403.6 and 40 C.F.R. chapter I, subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended), the Permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA and the State.

F. SLUDGE CONDITIONS

1. The Permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including EPA regulations promulgated at 40 C.F.R. Part 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 C.F.R. 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 C.F.R. Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 C.F.R. § 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 C.F.R. § 503.6.

5. The 40 C.F.R. Part 503 requirements include the following elements:

    - General requirements
    - Pollutant limitations
    - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
    - Management practices
    - Record keeping
    - Monitoring
    - Reporting

    Which of the 40 C.F.R. 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.[1]

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 C.F.R. § 503.8.

7. Under 40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 503.9(r), for use or disposal, then the Permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 C.F.R. § 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 C.F.R. § 503 Subpart B.

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

G. SPECIAL CONDITIONS

1. The Permittee shall operate the outfall according to the best management practices below:

    a. The outfall shall be maintained to ensure proper operation. Proper operation means that the outfall pipe be intact, operating as designed, and have unobstructed flow. Maintenance may include dredging in the vicinity of the outfall, removal of solids/debris in the outfall header pipe, and repair/replacement.

[1] This guidance document is available upon request from EPA Region 1 and may also be found at: http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf

b. To determine if maintenance will be required, the Permittee shall inspect and videotape the operation of the outfall either remotely or using a qualified diver or marine contractor. At a minimum, the inspections and videotaping shall be performed once every five years with the first inspection occurring within twelve (12) months of the effective date of the permit. EPA and MassDEP shall be contacted at least seven days prior to a dive inspection.

c. Any necessary maintenance dredging must be performed only during the marine construction season authorized by the Massachusetts Department of Marine Fisheries and only after receiving all necessary permits from the Massachusetts Department of Environmental Protection, U.S. Coast Guard, U.S. Army Corps of Engineers, and other appropriate agencies.

d. Copies of reports summarizing the results of each outfall inspection shall be submitted to EPA and MassDEP within 60 days of each inspection. Where it is determined that maintenance will be necessary, the Permittee shall provide the proposed schedule for the maintenance.

2. The Permittee shall notify the Massachusetts Division of Marine Fisheries within 4 hours of becoming aware of any emergency condition, plant upset, bypass, SSO discharges or other system failure which has the potential to violate bacteria permit limits and within 24 hours of becoming aware of a permit excursion or plant failure. The notification shall be sent to the following address and telephone number:

Division of Marine Fisheries
Shellfish Management Program
30 Emerson Avenue
Gloucester, MA 01930
(978) 282-0308

3. Pursuant to 40 CFR 125.123(d)(4), this permit shall be modified or revoked at any time if, on the basis of any new data, the director determines that continued discharges may cause unreasonable degradation of the marine environment.

4. The Permittee shall achieve compliance with the monthly average and daily maximum TRC limits of 0.18 mg/L and 0.31 mg/L one year from the effective date of the Permit. Beginning on the effective date of the Permit, interim TRC limits of 0.26 mg/L and 0.46 mg/L shall be in effect for this one-year period.

5. The Permittee shall achieve compliance with the monthly average total copper limit of 90 µg/L one year from the effective date of the Permit. Until the copper limit is effective, the Permittee shall have a once per month monitor only requirement.

H. 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 no later than the 15th day of the month electronically using NetDMR. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

   Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. *See* Part I.H.6. 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 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/.

4. 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) Request for change in WET testing requirement; and
      (5) Report on unacceptable dilution water / request for alternative dilution water for WET testing.
      (6) Report of new industrial user commencing discharge
      (7) Report received from existing industrial user

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

5. Submittal of Reports to EPA ECAD in Hard Copy Form

   a. The following notifications and reports shall be signed and dated originals, submitted as hard copy, with a cover letter describing the submission:

      (1) Prior to 21 December 2020, written notifications required under Part II.B.4.c, for bypasses, and Part II.D.1.e, for sanitary sewer overflows (SSOs). Starting on 21 December 2020, such notifications must be done electronically 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/.

   b. This information shall be submitted to EPA Enforcement and Compliance Assurance (ECAD) at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

6. State Reporting

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

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

7. Verbal Reports and Verbal Notifications

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

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

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

I. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are 1) a Federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§ 1251 et seq.; and 2) an identical State surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 CMR 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this State surface water discharge permit.

2. This authorization also incorporates the State water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this State surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

3. Each agency shall have the independent right to enforce the terms and conditions of this permit. 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 this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as a NPDES Permit issued by the EPA. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

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.

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

TABLE OF CONTENTS

[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. MA0100145
ROCKPORT WASTEWATER TREATMENT FACILITY
ROCKPORT, MASSACHUSETTS

The U.S. Environmental Protection Agency's Region 1 ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") are issuing a Final National Pollutant Discharge Elimination System ("NPDES") Permit for the Rockport Wastewater Treatment Facility ("WWTF") located in Rockport, Massachusetts. This permit is being issued under the Federal Clean Water Act ("CWA"), 33 U.S.C., §§ 1251 et. seq., and the Massachusetts Clean Waters Act, M.G.L. Ch. 21, §§ 26-35.

From October 11, 2019 through November 11, 2019, EPA and MassDEP (together, the "Agencies") solicited public comments on Draft NPDES Permit # MA0100145 ("Draft Permit"). EPA and MassDEP received comments from the Town of Rockport (the "permittee" or the "Town"), dated November 11, 2019. In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's responses to comments received on the Draft Permit. The Response to Comments explains and supports EPA's determinations underlying the Final Permit.

The Agencies' knowledge of the facility has benefited from the various comments and additional information submitted. The information and arguments presented, however, did not raise any substantial new questions concerning the permit that warranted the Agencies to exercise their discretion and reopen the public comment period. The Agencies did make certain clarifications and revisions in the Final Permit based upon the comments. These are explained in this document and reflected in the Final Permit. Below, the Agencies provide a summary of the changes made in the Final Permit. The analyses underlying these changes are contained in the responses to individual comments that follow and reflect the joint position of the Agencies.

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

A copy of the Final Permit may be also obtained by writing or calling Betsy Davis, USEPA, 5 Post Office Square, Suite 100 (Mail Code: 06-4), Boston, MA 02109-3912; Telephone: (617) 918-1576; Email davis.betsy@epa.gov.

I. Summary of Changes to the Final Permit

1. Footnote 8 of Part I.A.1 of the Final Permit has been modified to specify that samples require the holding time to be calculated based on effluent flow at the time of sample collection and length of the outfall pipe to determine the amount of time required for wastewater to pass between the point of collection and the outfall. *See* Response 3.

2. Part I.G.4 of the Final Permit includes a one-year compliance schedule to achieve the Total Residual Chlorine ("TRC") limits. Monthly average and maximum daily limits of 0.26 mg/L and 0.46 mg/L, carried forward from the 2011 Permit, will be the

interim TRC limits for the first year that the Final Permit is in effect. *See* Responses 3 and 5.

3. Part I.G.1.b of the Final Permit has been revised to require an inspection frequency of the outfall to a minimum of once every five years. *See* Response 6. The word diffuser has been changed to outfall in order to properly describe the Facility's effluent pipe.

4. Part I.G.2 of the Final Permit has been revised to include notification requirements to the Massachusetts Division of Marine Fisheries within 4 hours of the Permittee becoming aware of emergency conditions, plant upset, bypass, Sanitary Sewer Overflow ("SSO") discharges or other system failures which has the potential to violate bacteria permit limits and within 24 hours of becoming aware of a permit excursion or plant failure. *See* Response 7.

5. Part I.C.4.k of the Final Permit has been updated, regarding the level of detail required for the collection system mapping, to include "to the extent feasible." The Final Permit also requires the following: "If certain information is determined to be infeasible to obtain, a justification must be included along with the map. If EPA disagrees with the assessment, it may require the map to be updated accordingly." *See* Response 8.

II. Responses to Comments

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

A. Comments from Joseph P. Parisi, Jr., Director, Department of Public Works, Town of Rockport, Rockport, Massachusetts:

Comment 1

Revised Draft Permit: Due to the substantial revisions, new and more reliable data, and other additional information provided in this comment letter, The Town requests that EPA prepare and make available for additional public comment a revised Draft Permit incorporating the revisions requested herein. In addition, the Town requests that EPA and MassDEP meet with the Town to discuss the information provided herein prior to issuance of a revised Draft Permit.

Response 1

EPA has carefully reviewed the Town's comments submitted on the Draft Permit and has addressed these comments in the Response to Comments. The comments submitted do not in EPA's judgment raise "substantial new questions" on the permit under 40 C.F.R. § 124.14(b). The commenter has not specifically articulated why it believes the material in its comment letter satisfy that applicable regulatory threshold. The purpose of the comment period is to solicit the very type of materials in the Town's submission; this information was prompted by questions presented in the Draft Permit, fact sheet and other record materials and in certain cases led to revisions reflected in the Final Permit. In other words, the materials submitted by the Town were logical outgrowths of issues and questions for which the Town was already provided notice. This material, in addition,

has not resulted in EPA substantially revising the Draft Permit; to the contrary, only minimal changes have been made, most running to the benefit of the permittee.

In addition to concluding that the materials were neither "substantial" nor "new" within the meaning of the regulation, EPA also considered the fact that the permit is long expired in deciding not to reopen the permit for comment. Under the Act, permits are established for terms of no more than five years, and their provisions are expected to be revisited at regular intervals. There is also significant backlog of expired permits in the Region, which counsels against further delay without a clear and persuasive justification.

EPA began the NPDES Permit renewal process in May 2019, when we notified the Town that EPA and MassDEP were beginning to develop a revised NPDES Permit for the Rockport WWTF. On June 24, 2019, the Town met with EPA and MassDEP to conduct a site visit at the treatment plant and discuss the permitting process. At that meeting, EPA discussed changes that it has been consistently including in Massachusetts NPDES Permits, such as updated CMOM requirements, since the Town's 2011 Permit was issued. The Agencies explained at the meeting that the Town should expect these changes to be included in their revised permit.

As the Draft Permit was being developed over the summer of 2019, EPA notified the Town of changes specific to the Town's revised permit, such as a monthly average copper limit and the revised dilution factor and that the fact sheet issued with the Draft Permit would provide a detailed explanation of the changes. In light of the extensive engagement by the Agencies with the Town prior to the public comment period, the Agencies have relied on these written comments in developing the Final Permit.

Comment 2

Dilution Factor: In the calculation of water quality based effluent limitations, the Draft Permit utilized a new, more stringent dilution factor derived from the Coastal Hydrography of Rockport, MA Wastewater Effluent report (Report) (completed in June 2000) with a calculated dilution factor (DF) of 23:1 (for a DF of 24).

It should first be noted that this Report was developed to better manage shellfish growing areas. Specifically, the Massachusetts Division of Marine Fisheries (MDMF) had established a shellfish management area closure outside the prohibited area, with neither area being harvested for raw shellfish consumption. MDMF was interested in a hydrographic study of the WWTP effluent to determine if the WWTP effluent did not affect some of the management closure area. Specifically, the study objective was:

> "…to determine those hydrographic characteristics of the WWTP effluent such as travel time, dispersion, and dilution that may assist in evaluating the shellfish growing area classification."

While the effect of the WWTP effluent on the shellfish growing area is of great importance, there is little to no relationship of this effect to the determination of a dilution factor at the edge

of the regulatory mixing zone, used to establish water quality based effluent limitations (WQBELs) in a NPDES permit.

As EPA is aware, where regulatory mixing zones are allowed, WWTP effluent must meet criteria at the edge of this mixing zone. The edge of the regulatory mixing is a defined area and is not determined by the maximum observed dye concentration in any location of the receiving water, but rather should be determined by the dye concentration observed at the edge of the regulatory mixing zone.

Inasmuch as the Report provides no conclusive information as to the maximum or average concentration of dye at the edge of the mixing zone, there is no regulatory, environmental or scientific basis to use the value of 89.2 ppb in the dilution factor equation for setting WQBELs in NPDES permit.

As contained in this report: "The average WWTP flow during the injection was 33,040 gallons per hour. An average concentration of tracer dye in the effluent in the outfall pipe was 2015 ppb. The maximum observed dye concentration in the receiving water was 89.2 ppb. The DF was obtained by dividing the effluent dye concentration by the maximum observed receiving water concentration:

2015 ppb effluent pipe /89.2 receiving water ppb = 22.6 or 23 Dilution Factor

Nowhere in the report were regulatory mixing zones discussed, established or located.

Therefore, inasmuch as the Report was useful to determine dilution at certain areas with respect to shellfish harvesting, it is not applicable in any manner to the establishment of a dilution factor at the edge of the mixing zone. On this basis, the Town requests that the DF EPA derived from this report not be utilized to set WQBELs in the Draft Permit.

Until such time as the following critical issues can be addressed, the DF of 24 is not applicable or appropriate to the establishment of WQBELs for the Rockport WWTP:

- Provide the established chronic and acute regulatory mixing zones applicable to the WWTP discharge outfall;
- Provide the measured maximum value of dye concentration at the edge of the established mixing zones noted above;
- Provide the specific data used to calculate the average dye concentration of 2015 ppb from the outfall;
- Provide the regulatory basis for establishing the average or maximum dye concentrations at the edge of the mixing zone.

EPA has utilized certain dilution numbers from the Report, which bear no relationship to regulatory mixing zones, and through these calculations has determined that a significantly more stringent total residual chlorine effluent limitation is required, as well as a newly imposed effluent limitation for copper. The Town objects to the imposition of both of these limitations as calculated, since they are based on inappropriate data.

Request: The Town requests that EPA not use the newly calculated DF in the calculation of WQBELs in this Draft Permit and continue the use of the previous DF until and if, an appropriate dilution study for the imposition of WQBELs is conducted.

Response 2

When writing NPDES permits, EPA must utilize the best information reasonably available at the time of permit reissuance. It need not forestall permit issuance to develop the type of detailed hydrological information, studies or modeling called for by the commenter where its approach is clearly explained and rational in light of all the information in the administrative record. This is especially true here, where the permit is long expired. Further, nothing in the Act, EPA's regulations or the Commonwealth's Water Quality Standards (or implementing policies) require consideration of the very prescriptive factors identified by the commenter in order to calculate a dilution factor. Rather, that decision is committed to the permit writer's best professional judgment. Under federal regulations governing the NPDES permit, EPA uses procedures that account for, "where appropriate, the dilution of the effluent in the receiving water." 40 C.F.R. 122.44(d)(1)(ii).

Reliance here on a study by expert federal and state agencies that specifically models the behavior of the effluent in the receiving waters was appropriate and reasonable, as this information was clearly applicable to the technical question confronted by the permit writer and was used to determine, along with other information, the remaining assimilative capacity of the receiving waters, and the corresponding need for any limitations necessary to ensure compliance with water quality standards, which remain applicable and must be met throughout the receiving waters.

The dye study documented in the report, Coastal Hydrography of Rockport, MA Wastewater Effluent, was conducted to provide a better understanding of the behavior of the effluent from the Rockport WWTF upon discharge to Sandy Bay (EPA notes that all data is included in the study report). The Massachusetts Division of Marine Fisheries ("Marine Fisheries") uses dye studies, such as this one, to classify the waters around coastal outfalls and establish appropriate management plans for shellfish resources in accordance with the requirements of the Food and Drug Administration's ("FDA") National Shellfish Sanitation Program ("NSSP"). The report specifically states that the "report may assist others with an interest in the hydrography of the Rockport, MA Wastewater Treatment Plant ("WWTP") effluent after it discharges into coastal waters." A dye study of a wastewater treatment facility provides actual data to describe the behavior of an effluent plume in the receiving waters. Dye studies conducted to provide data to shellfish management agencies for management of shellfish resources are consistent with the goals of the NPDES program as both agencies are tasked with protecting the resources from the impact of the WWTF effluent. EPA has used the results of hydrologic dye studies to establish dilution factors in other coastal NPDES permits in Massachusetts (e.g., Newburyport WWTF).

The commenter may have preferred a more fine-tuned analysis, but gives no indication of how long such an analysis would take or the amount of resources such an analysis would

entail, and the commenter can only speculate whether it would yield more or less stringent limitations. The commenter, further, has been on notice for approximately a year that a Draft Permit was being developed. It could have pursued development of a more sophisticated model, study or analysis during that time but chose not to. In light of the above and given the expectation that permit reissuance should proceed with a spirit of expedition given the requirements and underlying objectives of the Act, EPA has opted to base its determination on existing analysis, which is clearly relevant to this inquiry.

EPA notes that the previous permit was developed using a dilution factor that was calculated using the UPLUME model. UPLUME is not the appropriate model for this marine discharge, which is subject to currents and tidal conditions. UPLUME is intended for stagnant conditions, such as lakes and ponds, with assumed ambient currents of zero.[1] The hydrography study states that "the currents in Sandy Bay appear to be complex and variable."[2] Against this backdrop, the commenter's suggestion that EPA simply rely on previous data is not persuasive. Moreover, the Clean Water Act requires the development of water quality-based effluent limits in NPDES permits to ensure that water quality standards are met. The Rockport WWTF discharges to Sandy Bay, the portion of which is located within Rockport Harbor. Rockport Harbor is designated for shellfishing in the Massachusetts WQS.[3] TRC can be toxic to aquatic life and impact shellfish harvesting areas, warranting a reasonably protective posture on the Agencies' part. EPA is obliged to determine the need for, and to calculate, effluent limitations that will be protective of human health and the environment.

EPA used the hydrography report to determine a dilution factor for the WWTF discharge, *not* as the commenter erroneously presumes to establish a regulatory mixing zone. Mixing zones may be established at the discretion of the state and involve specific demonstrations outlined in the state water quality standards at 314 CMR 4.03(2) and furthermore entail consideration of the factors outlined in the Massachusetts Implementation Policy for Mixing Zones[4]. Neither the Commonwealth nor EPA indicated in this (or the previous) fact sheet that it was establishing a mixing zone. The decision to establish a mixing zone is committed to the discretion of the Commonwealth pursuant to 314 CMR 4.03(2) ("In applying 314 CMR 4.00 the Department *may* recognize a limited area or volume of a waterbody as a mixing zone for the initial dilution of a discharge.") The Massachusetts Implementation Policy for Mixing Zones generally restricts the use of mixing zones in shellfish harvesting waters. In light of the foregoing, the Agencies disagree that the four "critical issues" outlined in the comment above, all of

[1] Environmental Protection Agency, 1991, "Technical Support Document for Water Quality Based Toxics Control," p. 77.
[2] United States Public Health Service, Food and Drug Administration, Division of Cooperative Programs, in collaboration with Massachusetts Division of Fisheries, Wildlife and Environmental Law Enforcement, Division of Marine Fisheries, 2000, "Coastal Hydrography of Rockport, MA Wastewater Effluent," p. 11.
[3] Marine Fisheries shellfishing designation is not the same as the shellfishing designation in the Massachusetts WQS. Waters designated for shellfishing in the WQS are subject to shellfishing water quality criteria regardless of whether shellfishing in those waters are approved for shellfishing by Marine Fisheries.
[4] Massachusetts Surface Water Quality Standards, Implementation Policy for Mixing Zones, January 8, 1993. https://www.epa.gov/sites/production/files/2014-12/documents/mawqs-mixing-zone.pdf

which presume the existence of a mixing zone, are necessary to resolve in order to establish an updated dilution factor for the discharge.

EPA determined a dilution factor that was consistent with federal regulations at 40 C.F.R. 122.44(d)(1)(ii), as well as the Massachusetts WQS, which state that "[i]n coastal and marine waters and for lakes and ponds, the Department will establish extreme hydrologic conditions at which aquatic life criteria must be applied on a case-by-case basis." 314 CMR 4.03(3)(c). MassDEP has found that the use of initial dilution as the critical condition for coastal and marine waters is consistent with state WQS.[5] "Initial dilution is the process which results in the rapid and irreversible turbulent mixing of the wastewater with the receiving water around the point of discharge."[6] Initial dilution is a function of the outfall design and the receiving water characteristics. In this case, the initial dilution which EPA used in the Draft Permit was based on the dye concentration measured within 30 minutes of slack tide. Therefore, EPA and MassDEP consider this initial dilution to represent an "extreme hydrologic condition" consistent with 314 CMR 4.03(3)(c).

Typically, outfall diffusers are designed to increase the initial dilution of a discharge by increasing the force at which the discharge is released into the receiving waters and to thereby increase the mixing. By contrast, the Rockport discharge is simply an open pipe on the sea floor[7] which provides negligible physical mixing. FDA and Marine Fisheries found the maximum dye concentration nearest the outfall (89.2 ppb) to be the best estimation of initial dilution. In its technical judgment, EPA believes that this estimate is reasonable, while acknowledging the inherent uncertainty associated with this conclusion. But these uncertainties tend to cut against the commenter's argument here. The hydrography report states that the initial dilution could be lower[8] and that the dye was highly concentrated near the outfall. The initial dilution value was measured approximately 30 minutes after slack tide. If the measurement was made at slack tide, when tidal currents are near zero, the dye would likely have been more concentrated around the outfall. EPA also notes that at the time the dye study was conducted, there was a near shore break in the outfall pipe that allowed effluent to be discharge prior to the end of the outfall. The outfall pipe has since been repaired and it is reasonable to assume that dye concentration at the end of the outfall would be even higher if the pipe had not been broken and all other study variables were equal. These uncertainties certainly do not under the Act favor application, as the Town advocates, of a less protective dilution factor, given the close proximity of shellfish beds and the potential impact on the human health of residents.

[5] Email Chain. Claire Golden, MassDEP to Michele Barden, EPA, RE: Critical hydrologic condition for coastal waters. April 13, 2020.
[6] Massachusetts Surface Water Quality Standards, Implementation Policy for Mixing Zones, January 8. 1993. EPA is relying on this policy for definitional purposes only.
[7] USPHS, FDA Div. of Cooperative Programs, in collaboration with Massachusetts Division of Fisheries, Wildlife and Environmental Law Enforcement, Div. of Marine Fisheries, 2000, "Coastal Hydrography of Rockport, MA Wastewater Effluent," p. 11.
[8] USPHS, FDA, Div. of Cooperative Programs in collaboration with Massachusetts DFWELE, Div. of Marine Fisheries, 2000, "Coastal Hydrography of Rockport, MA Wastewater Effluent," p. 11.

Therefore, EPA has determined that the revised dilution factor from this FDA/MA Marine Fisheries dye study is the appropriate dilution factor to be used in the Final Permit. With this said, EPA uses the best data available at the time of permit issuance.

Comment 3

Total Residual Chlorine: The WWTF disinfects using chlorine gas, which is injected into a carrier water stream and added to the effluent downstream of the secondary clarifier and secondary effluent sampling shed. Post chlorination sampling is conducted at a manhole less than 200 feet downstream of the injection manhole. To determine compliance with the Total Residual Chlorine (TRC) permit effluent requirement, grab-samples are taken using a plastic bottle on a plastic rod dipped into the sampling port on the downstream manhole in the WWTF driveway. Since the hydraulic retention time is in a range of 5–8 minutes between the dosing point and the sampling location, samples are left in the clear sample bottle, open in the refrigerator for approximately 15 minutes prior to analysis, to simulate circulation time in the effluent line.

The Town provides the following detailed comments with respect to the collection of the TRC sample, and the imposition of the new, more stringent TRC limit:

a) Sample Holding Time: The Town recommends that instead of a rigid 15- or 30-minute simulated chlorine contact time based on plant flow versus design flow, the simulated chlorine contact time should be calculated based on the plant flow at the time of sample collection. To accurately reflect what is happening in the treatment process at the time of collection, samples should be held in a dark environment for a period of time equal to the amount of time required for wastewater to pass between the point of collection and the outfall. Please see Table 1, below, which lists the 50, 80, 90 & 99th Percentile average monthly flows in million gallons per day, velocity and corresponding chlorine contact time in minutes (Note the pipe length is determined to 5,480 feet with a diameter of 18 inches). Figure 1 shows the approximate location of the effluent discharge pipe:

Table 1 Chlorine Contact Time (CCT) in Minutes

Flow (MGD)	Percentile	CCT (min.)	Gpm	Velocity (fps)
0.60	50%	173.9	416.67	0.53
0.90	80%	115.9	625.00	0.79
1.00	90%	104.3	694.44	0.88
1.34	99%	77.7	931.94	1.17

Figure 1 Effluent Discharge Conveyance Pipe:

Working with accurate data is always important, especially so here. Capping the holding time of a sample at an arbitrary number of minutes restricts the Town's ability to dose disinfectants at a proper rate to ensure adequate bacteria removal. Also, the current effluent limits are stringent, and if they remain and are evaluated based on incorrect simulated holding time data, the Town may have to unnecessarily explore dechlorination or other facility changes to comply.

While dechlorination does remove the harmful effects of chlorine, it introduces its own problems with the creation of chlorination by-products like chloroform, dibromochloromethane and/or dichlorobromomethane. These by-products are toxic pollutants that can have a harmful effect on the environment. If an extended holding time can show that the proper dosing is acceptable then we wouldn't have to introduce a new process that comes with its own set of environmental restrictions.

b) TRC Compliance Schedule: The Draft permit imposes a significantly more stringent TRC effluent limitation, with an effective date of permit issuance. In order to provide effective chlorine gas dosing such that pathogen limitations are consistently achieved, while maintaining compliance with the more stringent TRC limitation, will require an extended period of multiple testing, operations management and dosing technique/levels over a range of flows and temperatures.

Request: The Town requests a 59-month compliance schedule to meet the significantly more stringent TRC limitations of 0.18 mg/L as a monthly average and 0.31 mg/L as a daily maximum, as follows:

- Effective date of permit (EDP) + 12 months: engage engineering services to evaluate current treatability levels, and determine type and extent of disinfection necessary;
- EDP+24 months: design plant controls, prepare bidding documents and specifications, obtain funding;
- EDP+30 months: advertise contract for plant upgrade/controls;
- EDP+33 months: award contract;
- EDP+59 months: construct upgrade and provide necessary testing to ensure compliance with new limitations.

Figure 1. Chlorination manhole (left) and effluent sampling shed (right) at Rockport WWTF.

Response 3

EPA notes that neither the 2011 permit nor the Draft Permit included a specific holding time for samples collected for TRC or for bacteria analyses. However, EPA agrees that the simulated chlorine contact time could be calculated based on the plant flow at the time of sample collection because this results in a more accurate representation of real-time conditions at end of pipe during the sampling event. Therefore, the Final Permit requires the holding time to be calculated based on effluent flow at the time of sample collection and the volume of the outfall pipe to determine the amount of time required for wastewater to pass between the point of collection and the outfall. The following formula is to be used to calculate the holding time:

Contact time (in minutes) = [Volume of the outfall pipe (in million gallons)] / [effluent flow at time of sample collection (in MGD)] * 1440 minutes/day

The Final Permit also requires that a summary of the holding time and supporting calculations, including the volume of the outfall pipe and the effluent flow at time of sample collection, be submitted as an electronic attachment to the monthly DMRs. The Final Permit has been updated accordingly.

On June 26, 2019, EPA and MassDEP met with the Town. At this meeting, the Town stated that they did not have plans to change the disinfection method that is currently in operation (i.e., the use of chlorine gas). Effluent data from 2014-2018 (as presented in Appendix A to the Fact Sheet that accompanied the Draft Permit) indicates that the Town may need to make adjustments to its current operations (i.e., changing chlorine dosing rates, etc.) in order to consistently achieve the TRC limits that were proposed in the Draft Permit. In EPA's experience, this type of operational change would not necessitate a major upgrade. EPA notes that the revision to the holding time provision will simplify compliance with the new TRC limits, because the holding time will allow a longer chlorine contact time and result in a lower subsequent measure of TRC at the end of the holding time compared to the TRC that would be measured without this provision. This supports EPA's view that the Permittee will be able to comply with the new TRC limits without an upgrade to the disinfection system. Therefore, the Final Permit includes a one-year compliance schedule for meeting the TRC limits, which will enable the Town to account for seasonal variability (e.g., flows, temperature) in making any necessary operational adjustments. The TRC interim limits during the one year compliance period will be the same as those that are in the 2011 Permit; a monthly average limit of 0.26 mg/L and a maximum daily limit of 0.46 mg/L.

This compliance schedule is consistent with federal regulations at 40 C.F.R. §122.47(a)(1), which requires that any schedules of compliance require compliance "as soon as possible." If the Town finds that despite its reasonable best efforts to meet the limit by adjusting chlorine dosing take longer than one year to complete, or that extensive upgrades at the WWTF are necessary, the Town may contact EPA and request to come into compliance with the permit limit in accordance with an appropriate administrative order developed through EPA and MassDEP's enforcement programs. The Town may also request a permit modification, although that pathway would be subject to public notice and comment.

Therefore, the Final Permit includes a one-year compliance schedule to provide the Town with additional time to conduct multiple tests and adjust the operation management and dosing techniques to account for seasonal variability.

Comment 4

New Copper Limit:
In the Draft Permit, EPA has conducted a reasonable potential analysis for copper utilizing an inappropriate data set. Based upon this inappropriate data set, EPA has determined that reasonable potential exists to violate the surface water quality standard for copper, and imposed a new limitation on copper of 90 ug/L. The Town objects to this new copper limit on the following basis:

a) Use of inappropriately collected data: The data relied upon by EPA to conduct a cause analysis for copper, were collected by Town staff with the understanding that the samples were to be used for toxicity testing to determine suitability of the receiving water (Sandy Bay) as dilution water for the WET test, or alternately to provide analytical evidence that laboratory

dilution water is more appropriate to be used. WET testing historically involves determining the viability of the Inland Silverside and Mysid Shrimp in a range of effluent concentrations.

A detailed review of the Town's WET test sample collection method shows that the collection methods were never meant to be used to develop metals limits for NPDES Permits. Sample collection consisted of a Town staff member using laboratory supplied plastic 1000 mL bottles, dipping sample bottles into the Glen Cove marina off of the Granite Pier, downhill from a parking lot and within close proximity of several boat moorings. The sample bottles are driven in the back of a Town vehicle back to the WWTF, where samples are placed in a cooler with ice packs for approximately 2 hours before the laboratory courier picks up the samples and drives 2 hours back to the laboratory for sampling.

This method of ambient water collection would, at best, be considered marginally adequate to meet the Educational/Stewardship-level (lowest level and quality samples) as outlined in the MassDEP's Quality Management Plan1 (MQMP). The five years of metals data based on these samples that the EPA used in calculating reasonable potential for metals effluent limits do not come close to meeting the rigor (i.e., accuracy, precision, frequency, comparability, overall confidence, etc.) required for use in waterbody assessments or TMDL development.

b) Use of outdated and unsuitable data: We note that EPA relied upon data collected from 3/31/2014 through 3/31/2019. While some copper data samples in 2014 and 2015 were elevated, the previous four years of data samples (2016-2019) consistently demonstrate considerably lower concentration values. Conducting a reasonable potential analysis utilizing the last four years of copper data shows that no reasonable potential exists to exceed the surface water quality standard for copper, and therefore no copper effluent limitation is indicated.

Further, the Town does not have in place a Clean Sample Technique Program for the collection of effluent data utilized in the reasonable potential analysis. A review of the data utilized in the copper effluent development demonstrates a statistically significant range of data values from high to low – such that further investigation into the validity of the data is warranted.

EPA cannot rely on outdated and unsuitable data to calculate reasonable potential, and the proposed Copper limit is not based in sound science or law. As stated in Sierra Club v. U.S. E.P.A., "EPA stands on shaky legal ground relying on significantly outdated data." 671 F.3d 955, 966 (2012) (holding that it was arbitrary and capricious for EPA to approve an air quality standard based on old data without considering new data and providing an explanation for its choice); see also Dow AgroSciences LLC v. National Marine Fisheries Service, 707 F.3d 462, 473 (4th Cir. 2013) (finding that the Fisheries Service acted arbitrarily and capriciously in relying on outdated data, despite receiving newer data, without explaining why it used the older data) (quoting Sierra Club); Zen Magnets, LLC v. Consumer Product Safety Commission, 841 F.3d 1141, 1149-50 (10th Cir. 2016) ("In general, where there is a known and significant change or trend in the data underlying an agency decision, the agency must either take that change into account, or explain "Quality Assurance Program Plan, Surface Water Monitoring and Assessment" MassDEP. June 2015. Web. https://www.mass.gov/doc/quality-assurance-program-plan-for-surface-water-monitoringassessment-2015-2019/download 8 of 11 why it relied solely

on data pre-dating that change or trend.") (listing cases); District Hosp. Partners, L.P. v. Burwell, 786 F.3d 46, 57 (D.C. Cir. 2015) ("[A]n agency cannot ignore new and better data.").

c) Clean Sampling Program: To provide more accurate ambient and effluent sample data, the Town plans to develop and execute a clean sampling program to analyze effluent water quality from the WWTF.

Key aspects of the clean sampling program are:

- The Town will evaluate and select additional sampling sites based on EPA Method 1669 guidance, avoiding impacts from boating and roadway traffic while considering the impact of cove hydraulics at tidal stages;
- The Town will develop clean sampling protocols, assuring metals-free containers, provide a higher level of assessment for ambient contaminants, require a specific outline of sampler dress code to assure no stray introduction of contaminants along with detailed sample collection protocol and quality assurance steps;
- The clean sampling program uses Enthalpy Laboratory to provide the sample bottles, preparation of samples, and analytical services. Enthalpy complies with EPA Method 1669 for sampling preparation;

Use of accurate data is the cornerstone of the NPDES evaluation and issuance process, and a key tenet of the Federal Clean Water Act (see comments item 5.b).

Request: The Town requests that EPA utilize the most recent four years of data analysis (2016-2019) and rerun the reasonable potential analysis. In the event no cause or reasonable potential exists to impose a water quality-based effluent limitation for copper, please remove the copper limitation in the final permit. In the event that EPA is unwilling or unable to conduct the reasonable potential analysis will less than 10 data points, please allow the Town an opportunity to collect appropriate, additional copper samples utilizing the Clean Sampling Program, above, such that appropriate samples data may be utilized to determine cause or reasonable potential. The Town suggests that an accelerated and condensed sampling program consisting of 3 representative samples per week for a period of three weeks be conducted. The Town requests that EPA consider these additional samples in development of the final permit.

Response 4

EPA establishes effluent limitations and conditions in permits based on information available at the time of permit issuance.[9] Since the permittee has not provided additional data prior to Final Permit issuance for EPA to evaluate, although it indicated that they could be collected over a period of a few weeks, the Final Permit maintains the effluent limitation for copper that was proposed in the Draft Permit.

As importantly, the Town's plan to implement a clean sampling program to improve upon the quality of ambient and effluent data, while commendable, does not invalidate the effluent data that was collected in accordance with the 2011 permit and was used in the development of the Draft Permit. EPA disagrees with the premise that the data set used to determine

[9] EPA. 2010. *U.S. Environmental Protection Agency NPDES Permit's Manual.* (EPA-833-K-10-001), at pp. 6-23.

reasonable potential is unrepresentative or otherwise invalid. The permittee does not provide any reason why the copper data may have changed after 2015, and EPA has not been provided by the permittee with any reason to doubt the validity of all or any part of the data set. It is *not* appropriate to cherry pick data: if the sampling data were flawed in the permittee's estimation, then it is unclear why the more recent data would be less flawed than the 2014-2015 data (the removal of which, EPA observes, would lead to an absence of reasonable potential finding). The permittee, for example, does not point to any changes in sampling methodologies or practices around that time. The permittee's characterization of these data as "outdated" is speculative and entirely unsubstantiated. Accordingly, EPA has been provided with no persuasive reason to discount or to discard the effluent data set used in the development of the Draft Permit. These data are representative of the effluent over a period of years and, for that reason, the monthly average copper limit shall remain in the Final Permit. EPA's reasoning is described more fully below.

a. EPA's Use of the Entire Rather than a Portion of the Data Set Was Reasonable

EPA notes that any monitoring requirements in NPDES permits are required to be representative[10] and may be used during the permit reissuance process for the purpose of conducting a reasonable potential analysis and, if necessary, establishing effluent limits.

Permits include the WET Test Protocol and Procedure (Attachment A of the Permit) that incorporate standard sampling and analysis methods, pursuant to 40 CFR Part 136. Accurate WET test results are dependent on proper sample collection (ambient and effluent), which are referenced in the protocol. The comment refers to the Town's WET test sampling method and states that the WET samples were chilled well after the sample was collected. This procedure differs from the standard instructions in Attachment A of the Permit, which for reasons that have not been explained by the permittee depart from the explicit requirements of the permit. The Acute Marine WET Protocol cites Part 136 methods be used which requires that composite samples should be chilled as they are collected, and grab samples should be chilled immediately following collection. However, EPA does not consider this deviation from the protocol would have impacted the copper results, because temperature does not have an impact on total recoverable copper analyses.

The Permittee has been on notice of EPA's use of WET data for reasonable potential purposes for many years, and if it harbored concerns over the validity of these data, it had ample opportunity to cure any perceived shortcomings by bringing a clean sampling program online and by collecting more data. EPA has relied on the results of analyses conducted in conjunction with WET tests in evaluating reasonable potential for a pollutant to cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard in the previous permit. (See the metals reasonable potential in Section IV.G of the Town's 2007 Fact Sheet, which states, "All effluent

[10] See 40 C.F.R.§122.41 (j)(1) and (4) samples and measurements taken for purposes of monitoring shall be representative of the monitoring activity and monitoring results must be conducted in according to test procedures under 40 CFR Part 136 unless other procedures have been specified in the Permit.

metals data are taken from Toxicity Tests Reports from the period January 2007 to January 2009.")[11] It is not reasonable for the Town to seek to delay imposition of necessary effluent limitations to ensure protection of water quality standards on the basis of purported sampling deficiencies that the Town concedes are entirely of its own making.

The Educational/Stewardship-level referenced in the comment is for ambient data collected by an external data source that may be used by MassDEP's Watershed Planning Program for use in water quality assessments. This is a policy from MassDEP for accepting data for the development of water quality assessments rather than for use in the NPDES program. Rather, Permittees must fulfill the requirements of sampling methods described in 40 CFR Part 136. Furthermore, as noted in the Fact Sheet, EPA did not use ambient data in the reasonable potential analysis for copper in either the 2011 Permit or the Final Permit but assumed zero as the background concentration because ambient data was not available at the time of permit development.

b. Data Used by EPA to Determine Reasonable Potential Was Neither Outdated Nor Unsuitable

In developing effluent limits, EPA utilizes the best information reasonably available at the time of permit reissuance.[12] EPA reviews data supplied by the Permittee in the NPDES permit application and five years of effluent data submitted on monthly discharge monitoring reports; this five-year range is anchored in the Act, as it accords with the maximum length of NPDES permits. From a technical standpoint, this range characterizes the effluent and assesses the need for a water quality-based effluent limit in a permit, as it captures variability in the effluent due to different climactic and operating conditions over a reasonable period of time. From that same view, standard five-year data sets provide uniformity within the permit itself, as all limits are calculated using that same time period. From a programmatic perspective, it is also consistent with other individual NPDES Permits issued to POTWs in Massachusetts, allowing for a comparison among permits using data sets.[13] Reviewing only four years of WET test copper data not only reduces the data set, it would be inconsistent with the way the reasonable potential analyses were applied for the other metals. EPA acknowledges that there may be instances where legitimate and persuasive concerns are raised with respect to a particular portion of the five-year data collection period. With that said, EPA does not believe that adjusting the period of record in this case without any justification for why a shorter period of record would be more representative of the discharge would be reasonable.

[11] https://www3.epq.gov/region1/npdes/permits/2011/finalma0100145permit.pdf
[12] EPA. 2010. *U.S. Environmental Protection Agency NPDES Permit's Manual.* (EPA-833-K-10-001). Washington, DC: U.S. Government Printing Office. Page 6-23.

[13] https://www.epa.gov/npdes-permits/massachusetts-npdes-permits.

Comment 5

Compliance Schedule: The Draft Permit requires new limitations for copper and TRC. Notwithstanding comments elsewhere in this document where the Town provides the basis for removal of the limitations for each of these parameters, in the event that EPA continues to include new and more stringent limitations, we have the following comments on the compliance schedule: a) EPA has provided no compliance schedule for TRC. Please see our comments with respect to TRC under comment 3, above. EPA has provided a one (1) year compliance schedule for copper. It is simply not possible for the WWTF to meet these limitations within one year. The plant has not been designed for metals removals to the extent required by this Draft Permit as presented. The Town will need to evaluate the current treatment process and determine the type and extent of upgrade(s) necessary to meet the new limitations. Further, the Commonwealth of Massachusetts procedures for bidding and procurement are extensive and require adequate time for each phase of the design, construction bidding, award, and implementation process. These procedures include but are not limited to budgeting and obtaining funding, procurement of engineering services to determine current plant treatability levels and the extent of upgrade required, design of the necessary upgrade, development and bidding plans and specifications, advertising and bidding process, and contract award – all of which must occur prior to beginning work on the contract.

Request: The Town requests the following compliance schedule for copper:

- Effective date of permit (EDP) + 12 months: engage engineering services to evaluate current plant treatability levels, and determine type and extent of upgrade necessary;
- EDP+24 months: design plant upgrade, prepare bidding documents and specifications, obtain funding;
- EDP+30 months: advertise contract for plant upgrade;
- EDP+33 months: award contract;
- EDP+59 months: construct upgrade and provide necessary testing to ensure compliance with new limitations.

Response 5

Regarding the copper limit, EPA agrees that a compliance schedule is warranted, given that this is a new water quality-based effluent limit and the WWTF may not be able to achieve the limit. However, EPA does not agree with the proposed schedule in the comment. Under NPDES regulations, schedules must lead to compliance "as soon as possible." 40 C.F.R. § 122.47(a)(1). The Town stated in the previous comment that the ". . . previous four years of data samples (2016-2019) consistently demonstrate considerably lower concentration values." Based on this information, EPA expects that the Town can achieve the copper limit (the last time the Facility exceeded 90 ug/L was in 2015 based on their 2/year WET tests) and the one-year compliance schedule shall remain in the Final Permit. If it is determined that a plant upgrade at the Facility is required to achieve the copper limit, EPA will work with the Town to develop an appropriate compliance schedule in an administrative order or permit modification.

Regarding the total residual chlorine limits ("TRC"), EPA agrees a compliance schedule is warranted given that the effluent limits are more stringent than the limits in the 2011 Permit, and it is likely, albeit not certain, whether the Facility can achieve immediate

compliance with the revised TRC limits using the disinfection method currently employed. As noted during the June 26, 2019 site visit, EPA's understanding is that the Town is planning to keep its current disinfection system and EPA believes that adjusting the amount of chlorine would not require more than one year to achieve the effluent limits. Therefore, the Final Permit includes a one-year compliance schedule for the TRC limits. The one-year schedule has been included to give the Permittee an opportunity to monitor and confirm that no additional action is required in case there is any seasonal variation. The interim limits shall be the same limits that are in the 2011 Permit. *See* Response 3.

Comment 6

Effluent Diffuser Best Management Practice: Special Condition G.b. of the Draft Permit requires the Town to either provide remote videotaping of the diffuser or use a qualified diver or marine contractor to ensure the diffuser is operating properly. The Town has no reason to believe there is any malfunction of any portion of the outfall pipe. To the best of our knowledge there is no obstruction, sedimentation or other physical barrier that prevents the appropriate discharge of the WWTP effluent. While the Town understands the importance of appropriate characterization of its discharge pipe, the requirement to conduct multiple inspections is overly burdensome for a facility of this size and location. Please provide the basis for EPA's requirement to conduct such an inspection, as we do not routinely see this requirement in other permits.

Request: The Town requests that the requirement to video tape or hire a diver to inspect the outfall be limited to one occasion during the course of the permit cycle.

Response 6

EPA agrees with the Permittee regarding the inspection frequency and has revised Part I.G.1.b of the Final Permit to require an inspection of the outfall to be conducted every five years with the first inspection occuring within twelve (12) months of the effective date of the permit.

Please see Response 8 below regarding EPA's authority to impose municipal data collection and reporting requirements. The requirement to conduct inspections of the outfall are consistent with the Operation and Maintenance requirements found in Part II.B.4., General Conditions, of the Final Permit.

Comment 7

Required Notifications: Special Condition G.2 requires that notification be provided to the Massachusetts Division of Marine Fisheries within 4 hours of any emergency condition. Further, that within 24 hours of a permit excursion or plant failure, additional notifications are required. While the Town has no objection to the notifications as described in this section, we note that at times, the Town may not know immediately of an SSO, system failure or other emergency condition which has the potential to violate a bacteria limit. We request that the requirement of this section be modified to require the appropriate notification within 4 hours (or 24 hours) of the Town becoming aware of such a condition.

Request: Please modify the language as shown below: The permittee shall verbally notify the Massachusetts Division of Marine Fisheries within 4 hours of <u>becoming aware</u> of any emergency condition, plant upset, bypass, SSO discharges or other system failure which has the potential to violate bacteria permit limits. Within 24 hours <u>of becoming aware of</u> ~~a notification of~~ a permit excursion or plant failure, <u>a notification</u> shall be sent to the following address:

Response 7

EPA has revised the notification language in Part I. G.2. Special Conditions of the Final Permit. The Permittee is responsible for notifying the Massachusetts Division of Marine Fisheries within 4 hours of becoming aware of emergency conditions, plant upsets, bypasses, SSO discharges or other system failures that has the potential to violate bacteria permit limits and within 24 hours of becoming aware of a permit excursion or a plant failure.

Comment 8

Collection System Mapping: In Part 1.C.4 of the Draft Permit, EPA is requiring that within 30-months of the effective date of this permit, the permittee shall prepare detailed and extensive collection system mapping. Please see our detailed comments below:

a. Please provide the regulatory authority for this request;
b. Mapping is required of all sanitary sewers and manholes. Please revise this language to state, "All sanitary sewer extensions in the public-right-of way owned by the Town of Rockport."
c. Where the requirements mention information such as pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow, please revise this language to include "to the extent feasible."

Request: The Town requests the modifications to this section as noted above.

Response 8

Part I.C.4. Collection System Mapping has been a standard requirement in all NPDES Permits issued in Massachusetts for close to ten years. EPA has broad authority under the CWA and regulations to prescribe municipal data collection and reporting requirements. *See* CWA § 308(a)(A), 33 U.S.C. § 1318(a)(A) (specifying that permittees must provide records, reports, and other information EPA reasonably requires); CWA § 402(a)(2), 33 U.S.C. § 1342(a)(2) (requiring permittees to provide data and other information EPA deems appropriate); 40 C.F.R. § 122.41(h) (permittees shall furnish "any information" needed to determine permit compliance); 40 C.F.R. § 122.44(i) (permittees must supply monitoring data and other measurements as appropriate); *see also, e.g., In re City of Moscow*, 10 E.A.D. 135, 170-71 (EAB 2001) (holding that EPA has "broad authority" to impose information-gathering requirements on permittees); *In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 671-72 (EAB 2001) (holding that CWA confers "broad authority" on permit issuers to require monitoring and information from permittees). The mapping, O&M planning, and annual reporting requirements readily fall within the bounds of these broad provisions. The commenter should be aware that the

Board has upheld collection system and mapping provisions in *In re Town of Concord Dep't of Pub. Works*, 16 E.A.D. 514, 543-45 (EAB 2014).

The intent of the Collection System mapping requirements is to have a map of the Town's system so that all structures are accounted for and known. EPA has determined that the requirement of all sewers is necessary to ensure the proper operation and maintenance of the collection system and it is included to minimize the occurrence of permit violations that have a reasonable likelihood of adversely affecting human health or the environment. A specific example is the requirement to address illegal sump pumps and roof down spouts, which is a logical extension of the requirements of the O&M Plan to adequately operate and maintain the collection system. These requirements are intended to highlight specific problems that are common to most communities, but difficult to control. The Town reported on its NPDES Permit Application that 10% of the flow treated at the Facility stems from I/I. In an on-going effort to further minimize sources of I/I the Town would need to locate tie-ins to the sewer system. If the permittee determines that I/I quantities in its collection system are sufficiently low and there are no overflows from the collection system or effluent violations at the wastewater treatment plant, efforts to remove sumps and down spouts may be minimal.

The request to limit the sewer system mapping requirement to "All sanitary sewer extensions in the public-right-of way owned by the Town of Rockport" has not been included in the Final Permit. This would not provide an accurate representation of the complete collection system, as it would exclude sewers that are not located beneath public rights of way.

Regarding the pipe diameter, date of installation, type of material, etc., EPA understands that some information may be infeasible to obtain. Therefore, Part I.C.4.k of the Final Permit has been revised to include "to the extent feasible." However, if certain information is determined to be infeasible to obtain, a justification for not providing the information 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 default to the original formulation in the next permit cycle if it determines that Rockport's justifications were inappropriate and/or inadequate.

Comment 9

Collection System O & M Plan: In Part 1.C.5(a) of the Draft Permit EPA is requiring the submission of a report that provides a description of the collection system management goal, staffing information, and legal authorities. In addition, it requires a list of pump stations, recent studies and construction activities, and a plan for the development of a comprehensive operation and maintenance plan.

Part 1.C.5(b) requires the submission of a full Collection System O&M Plan, with detailed requirements as listed in the draft permit. The Town's detailed comments are provided below:

a) Part I.C.5.(a): Six months is an insufficient amount of time to research, analyze, describe and report on these numerous items. In addition, any procurement process requires approval of

funding, preparation of request for proposal to select consulting firm, negotiation of contract with selected firm to start the work. This process typically takes 9-12 months. Therefore, the Town requests that 18 months be allowed for compliance with this condition.

b) Part I.C.5(b): requires that a complete and comprehensive Operation and Maintenance (O&M) Plan be completed, implemented, and submitted to EPA and MassDEP within 24 months. As above, this is a tremendous undertaking requiring an extensive amount of time and resources. In addition, the procurement process typically takes 9-12 months. Therefore, the Town requests that 36 months be provided for the completion and implementation of this plan.

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

Response 9

EPA believes 6 and 24 months, respectively, is sufficient time for complying with the requirements in Part I.C.5(a) and (b). EPA has been including the Capacity, Management, Operation and Maintenance ("CMOM") requirements in municipal permits in both New Hampshire and Massachusetts for more than 10 years and permittees and co-permittees have consistently been able to fulfill these requirements within this timeframe, as evidenced by their timely submissions. The 2011 Permit required several of the requirements that are listed in Part I.C.5(b) such as identifying and removing sources of I/I, preventative maintenance and an educational outreach program and the Town would only need to update that information. Therefore, the provision establishing that the Permittee should provide the best available information within the timeframes designated in Part I.C.5. is unchanged in the Final Permit.

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"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§ 26-53),

Town of Rockport, Massachusetts

is authorized to discharge from the facility located at

Rockport Wastewater Treatment Facility
46 Pleasant Street
Rockport, MA 01966

to receiving water named

Sandy Bay (MA93-57)

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 February 7, 2011.

This permit consists of the cover page(s), **Part I**, **Attachment A** (Marine Acute Toxicity Test Procedure and Protocol, July 2012) and **Part II (**NPDES Part II Standard Conditions, April 2018).

Signed this day of

Ken Moraff, Director	Lealdon Langley, Director
Water Division	Division of Watershed Management
Environmental Protection Agency	Department of Environmental Protection
Region 1	Commonwealth of Massachusetts
Boston, MA	Boston, MA

[1] Pursuant to 40 Code of Federal Regulations (C.F.R.) § 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. Procedures for appealing EPA's Final Permit decision may be found at 40 C.F.R. § 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 001 to Sandy Bay. 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]**
Effluent Flow[5]	0.8 MGD Rolling Average	---	---	Continuous	Recorder
Effluent Flow[5]	Report MGD	---	Report MGD	Continuous	Recorder
BOD_5	30 mg/L 200 lb/day	45 mg/L 300 lb/day	Report mg/L	1/week	Composite
BOD_5 Removal	≥ 85 %	---	---	---	---
TSS	30 mg/L 200 lb/day	45 mg/L 300 lb/day	Report mg/L	1/week	Composite
TSS Removal	≥ 85 %	---	---	---	---
pH Range[6]	6.5 - 8.5 S.U.			1/day	Grab
Total Residual Chlorine[7,8]	0.18 mg/L	---	0.31 mg/L	3/day	Grab
Fecal coliform[8]	88 organisms/ 100 mL	---	260 organisms/ 100 mL	2/week	Grab
Eneterococci[8]	35 colonies/ 100 mL	---	276 colonies/ 100 mL	2/week	Grab
Total Recoverable Copper[9]	90 µg/L	---	---	1/month	Composite
Total Nitrogen[10]	Report mg/L Report lb/day	---	Report mg/L Report lb/day	1/month	Composite
Total Kjeldahl Nitrogen	Report mg/L Report lb/day	---	Report mg/L Report lb/day	1/month	Composite
Total Nitrate + Nitrite	Report mg/L Report lb/day	---	Report mg/L Report lb/day	1/month	Composite

Effluent Characteristic	Effluent Limitation			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Whole Effluent Toxicity (WET) Testing[11,12]					
LC_{50}	---	---	≥ 100 %	2/year	Composite
Salinity	---	---	Report ppt	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

Ambient Characteristic[13]	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
Salinity	---	---	Report ppt	2/year	Grab
Ammonia Nitrogen	---	---	Report mg/L	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
pH[14]	---	---	Report S.U.	2/year	Grab
Temperature[14]	---	---	Report °C	2/year	Grab

Influent Characteristic	Reporting Requirements			Monitoring Requirements[1,2,3]	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type[4]
BOD_5	Report mg/L	---	---	2/month	Composite
TSS	Report mg/L	---	---	2/month	Composite

Footnotes:

1. Effluent samples shall yield data representative of the discharge. 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. 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 C.F.R. Part 136.

2. In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. 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 C.F.R. Part 136 or required under 40 C.F.R. 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" for all non-detects for that reporting period and report the average of all the results.

4. Each composite sample will consist of at least twenty-four (24) grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportional to flow.

5. Report annual average, monthly average, and the maximum daily flow in million gallons per day (MGD). The limit is an annual average, which shall be reported as a rolling average. The value 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.

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.).

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. 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. *Enterococci* and Fecal Coliform monitoring shall be conducted concurrently with TRC monitoring, if TRC monitoring is required. The monthly average limit for Fecal Coliform is expressed as a geometric mean. For samples tested using the Most Probable Number (MPN) method, the units may be expressed as MPN. The units may also be espressed as colony forming units (cfu) when using the Membrane Filtration method.

9. See Part I.G.4 for a compliance schedule and interim monitoring requirement for copper.

10. Total Nitrogen shall be calculated as the sum of Total Kjeldahl Nitrogen and Total Nitrate + Nitrite.

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

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

11. 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 (*Menidia beryllina*). Toxicity test samples shall be collected and tests completed during the same weeks each time of calendar quarters ending March 31st, and September 30th. The complete report for each toxicity test shall be submitted as an attachment to the monthly DMR submittal immediately following the completion of the test.

12. 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.

13. 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 outside 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.

14. 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.

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

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

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

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

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

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

    a. Any new introduction of pollutants into the Publicly-Owned Treatment Works (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 C.F.R. Part 122 Appendix A as amended) discharging process water; and

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

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

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

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

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

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 in accordance with Part II.D.1.e.(1) (24-hour reporting). See Part I.H below for reporting requirements.

2. Starting December 21, 2020, 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 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.

3. Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes MassDEP Regional Office telephone numbers). The reporting form and instruction for its completion may be found on-line at https://www.mass.gov/how-to/sanitary-sewer-overflowbypassbackup-notification.

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. 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 31st 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

f. If the average annual flow in the previous calendar year exceeded 80 percent of the facility's 0.8 MGD design flow (0.64 MGD), or there have been capacity related overflows, the report shall include:

(1) Plans for further potential flow increases describing how the Permittee will maintain compliance with the flow limit and all other effluent limitations and conditions; and
(2) A calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year.

D. ALTERNATE POWER SOURCE

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

E. INDUSTRIAL USERS

1. The Permittee shall submit to EPA and the State the name of any Industrial User (IU) subject to Categorical Pretreatment Standards under 40 C.F.R. § 403.6 and 40 C.F.R. chapter I, subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended) who commences discharge to the POTW after the effective date of this permit.

   This reporting requirement also applies to any other IU who discharges an average of 25,000 gallons per day or more of process wastewater into the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW; or is designated as such by the Control Authority as defined in 40 C.F.R. § 403.12(a) on the basis that the industrial user has a reasonable potential to adversely affect the wastewater treatment facility's operation, or for

violating any pretreatment standard or requirement (in accordance with 40 C.F.R. § 403.8(f)(6)).

2. In the event that the Permittee receives reports (baseline monitoring reports, 90-day compliance reports, periodic reports on continued compliance, etc.) from industrial users subject to Categorical Pretreatment Standards under 40 C.F.R. § 403.6 and 40 C.F.R. chapter I, subchapter N (Parts 405-415, 417-436, 439-440, 443, 446-447, 454-455, 457-461, 463-469, and 471 as amended), the Permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA and the State.

F. SLUDGE CONDITIONS

1. The Permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including EPA regulations promulgated at 40 C.F.R. Part 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 C.F.R. 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 C.F.R. Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 C.F.R. § 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 C.F.R. § 503.6.

5. The 40 C.F.R. Part 503 requirements include the following elements:

    - General requirements
    - Pollutant limitations
    - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
    - Management practices
    - Record keeping
    - Monitoring
    - Reporting

    Which of the 40 C.F.R. 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.[2]

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 C.F.R. § 503.8.

7. Under 40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 503.9(r), for use or disposal, then the Permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 C.F.R. § 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 C.F.R. § 503 Subpart B.

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

G. SPECIAL CONDITIONS

1. The Permittee shall operate the effluent diffuser according to the best management practices below:

    a. The effluent diffuser shall be maintained to ensure proper operation. Proper operation means that the outfall pipe be intact, operating as designed, and have unobstructed flow. Maintenance may include dredging in the vicinity of the diffuser, removal of solids/debris in the diffuser header pipe, and repair/replacement.

[2] This guidance document is available upon request from EPA Region 1 and may also be found at: http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf

b. To determine if maintenance will be required, the Permittee shall inspect and videotape the operation of the diffuser either remotely or using a qualified diver or marine contractor. The inspections and videotaping shall be performed every two years with the first inspection occurring within twelve (12) months of the effective date of the permit. EPA and MassDEP shall be contacted at least seven days prior to a dive inspection.

c. Any necessary maintenance dredging must be performed only during the marine construction season authorized by the Massachusetts Department of Marine Fisheries and only after receiving all necessary permits from the Massachusetts Department of Environmental Protection, U.S. Coast Guard, U.S. Army Corps of Engineers, and other appropriate agencies.

d. Copies of reports summarizing the results of each diffuser inspection shall be submitted to EPA and MassDEP within 60 days of each inspection. Where it is determined that maintenance will be necessary, the Permittee shall provide the proposed schedule for the maintenance.

2. The Permittee shall verbally notify the Massachusetts Division of Marine Fisheries within 4 hours of any emergency condition, plant upset, bypass, SSO discharges or other system failure which has the potential to violate bacteria permit limits. Within 24 hours a notification of a permit excursion or plant failure shall be sent to the following address:

Division of Marine Fisheries
Shellfish Management Program
30 Emerson Avenue
Gloucester, MA 01930
(978) 282-0308

3. Pursuant to 40 CFR 125.123(d)(4), this permit shall be modified or revoked at any time if, on the basis of any new data, the director determines that continued discharges may cause unreasonable degradation of the marine environment.

4. The Permittee shall achieve compliance with the total copper limit within 12 months of the effective date of the permit. Until the copper limit is effective, the Permittee shall have a once per month monitor only requirement.

H. 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 no later than the 15th day of the month electronically using NetDMR. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

2. Submittal of Reports as NetDMR Attachments

   Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. *See* Part I.H.6. 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 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/.

4. 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) Request for change in WET testing requirement; and
      (5) Report on unacceptable dilution water / request for alternative dilution water for WET testing.
      (6) Report of new industrial user commencing discharge
      (7) Report received from existing industrial user

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

5. Submittal of Reports to EPA Enforcement and Compliance Assurance Division (ECAD) in Hard Copy Form

   a. The following notifications and reports shall be signed and dated originals, submitted as hard copy, with a cover letter describing the submission:

(1) Prior to 21 December 2020, written notifications required under Part II.B.4.c, for bypasses, and Part II.D.1.e, for sanitary sewer overflows (SSOs). Starting on 21 December 2020, such notifications must be done electronically 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/.

b. This information shall be submitted to EPA ECAD at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Compliance Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912

6. State Reporting

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

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

7. Verbal Reports and Verbal Notifications

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

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

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

I. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are 1) a Federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§ 1251 et seq.; and 2) an identical State surface water

discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 CMR 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this State surface water discharge permit.

2. This authorization also incorporates the State water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this State surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

3. Each agency shall have the independent right to enforce the terms and conditions of this permit. 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 this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as a NPDES Permit issued by the EPA. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

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.

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

TABLE OF CONTENTS

[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: MA0100145

PUBLIC NOTICE START AND END DATES: October 11, 2019 – November 11, 2019

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Rockport
Department of Public Works
34 Broadway
Rockport, Massachusetts 01966-1537

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Rockport Wastewater Treatment Facility
46 Pleasant Street
Rockport, Massachusetts 01966

RECEIVING WATER AND CLASSIFICATION:

North Coastal Basin
Sandy Bay (MA93-57): Class SB

TABLE OF CONTENTS

FIGURES

APPENDICES

1 Proposed Action

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

The permit currently in effect was issued on February 7, 2011 with an effective date of May 1, 2011 and expired on April 30, 2016 (the "2011 Permit"). The Permittee filed an application for permit reissuance with EPA dated September 25, 2015 as required by 40 Code of Federal Regulations (C.F.R.) § 122.6. Since the permit application was deemed timely and complete by EPA on September 25, 2015 the Facility's 2011 Permit has been administratively continued pursuant to 40 C.F.R. § 122.6 and § 122.21(d). EPA and the State conducted a site visit on June 24, 2019.

This NPDES Permit is issued jointly by EPA and MassDEP under federal and state law, respectively. As such, all the terms and conditions of the permit are, therefore, incorporated into and constitute a discharge permit issued by the Director of the Division of Watershed Management pursuant to M.G.L. Chap. 21, § 43.

2 Statutory and Regulatory Authority

Congress enacted the Clean Water Act (CWA), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *See* 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 §§ 303(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. *See* 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 C.F.R. §§ 122, 124, 125, and 136.

Section 301 of the CWA provides 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, 304(b); 40 C.F.R. §§ 122, 125, and 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 biochemical oxygen demand (BOD_5), total suspended solids (TSS) and pH. *See* 40 C.F.R. § 133.

Under § 301(b)(1) of the CWA, 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 C.F.R. § 125.3(a)(1).

2.2 Water Quality-Based Requirements

The CWA and federal regulations require that effluent limitations 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* § 301(b)(1)(C) of the CWA and 40 C.F.R. §§ 122.44(d)(1) and 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 C.F.R. § 131.10-12. Generally, WQSs consist of three parts: 1) beneficial designated use or uses 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) anti-degradation 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 C.F.R. § 131.12. The applicable State WQSs can be found in 314 of the Code of Massachusetts Regulations, Chapter 4 (314 CMR 4.00).

Receiving water requirements are established according to numerical and narrative standards in WQSs adopted under State law for each water body classification. When using chemical-specific numeric criteria to develop permit limits, 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 are therefore typically applicable to monthly average limits.

When permit effluent limits are necessary for a pollutant to meet narrative water quality criteria, the permitting authority must establish effluent limits in one of three ways: 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," on a "case-by-case basis" using CWA § 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an indicator parameter. *See* 40 C.F.R. § 122.44(d)(1)(vi)(A-C).

2.2.2 Antidegradation

Federal regulations found at 40 C.F.R. § 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 that high quality waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and support recreation in and on the water, are maintained 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.

Massachusetts' statewide antidegradation policy, entitled "Antidegradation Provisions", is found in the State's WQSs at 314 CMR 4.04. Massachusetts guidance for the implementation of this policy is in an associated document entitled "Implementation Procedure for the Antidegradation Provisions of the State Water Quality Standards", dated October 21, 2009. According to the policy, no lowering of water quality is allowed, except in accordance with the antidegradation policy, and all existing in-stream uses and the level of water quality necessary to protect the existing uses of a receiving water must be maintained and protected.

This permit is being reissued with effluent limitations sufficiently stringent to protect the existing uses of the receiving water.

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, the 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 of 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 is essentially a pollution budget designed to restore the health of an impaired water body. A TMDL typically identifies the source(s) of the pollutant from direct and indirect discharges, determines the maximum load of the pollutant that can be discharged to a specific water body while maintaining WQSs for designated uses, and allocates that load to the various pollutant sources, including point source discharges, subject to NPDES permits. *See* 40 C.F.R. § 130.7.

For impaired waters where a TMDL has been developed for a particular pollutant and the TMDL includes a waste load allocation for a NPDES permitted discharge, the effluent limit in the permit may not exceed the waste load allocation. *See* 40 C.F.R. § 122.44(d)(1)(vii)(B).

2.2.4 Reasonable Potential

Pursuant to 40 C.F.R. § 122.44(d)(1), NPDES permits must contain any requirements in addition to TBELs necessary to achieve water quality standards established under § 303 of the CWA. In addition, limitations "must control any pollutant or pollutant parameter (conventional, non-conventional, or toxic) which the Director 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". *See* 40 C.F.R. § 122.44(d)(1)(i). There is reasonable potential to cause or contribute to an excursion if the projected or actual in-stream concentration exceeds the applicable criterion. If the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to such an excursion, the permit must contain WQBELs for the pollutant. *See* 40 C.F.R. 122.44(d)(1)(iii).

In determining reasonable potential, EPA considers: 1) existing controls on point and non-point sources 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 in the receiving water. EPA typically considers the statistical approach outlined in *Technical Support Document for Water Quality-based Toxics Control (TSD)*[1] to determine if the discharge causes, or has the reasonable potential to cause, or contribute to an excursion above any WQS. *See* 40 C.F.R. § 122.44(d). EPA's quantitative approach statistically projects effluent concentrations based on available effluent data, which are then compared to the applicable WQC.

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 or it is deemed that the state has waived its right to certify. Regulations governing state certification are set forth in 40 C.F.R. § 124.53 and § 124.55. EPA has requested permit certification by the State pursuant to 40 C.F.R. § 124.53 and expects that the Draft Permit will be certified.

If the State believes that any conditions more stringent than those contained in the Draft Permit are necessary to meet the requirements of either the CWA §§ 208(e), 301, 302, 303, 306 and 307 or the appropriate requirements of State law, the State should include such conditions and, in each case, cite the CWA or State law reference upon which that condition is based. Failure to provide such a citation waives the right to certify as to that condition. The only exception to this is that the sludge conditions/requirements implementing § 405(d) of the CWA are not subject to the § 401 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 the applicable procedures of 40 C.F.R. § 124.

[1] March 1991, EPA/505/2-90-001

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 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." *See* 40 C.F.R. § 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 limits based upon water quality standards and state requirements are contained in 40 C.F.R. § 122.4 (d) and 40 C.F.R. § 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).

EPA may use design flow of wastewater effluent both to determine the necessity for effluent limitations in the permit that comply with the Act, and to calculate the limits themselves. EPA practice is to use design 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 wastewater effluent flow exceed the flow assumed in these calculations, the instream dilution would decrease and the calculated effluent limits may not be protective of WQSs. Further, pollutants that do not have the reasonable potential to exceed WQSs at the lower wastewater discharge flow may have reasonable potential at a higher flow due to the decreased dilution. To ensure that the assumptions underlying the Region's reasonable potential analyses and derivation of permit effluent limitations remain sound for the duration of the permit, the Region may ensure its "worst-case" wastewater effluent flow assumption through imposition of permit conditions for wastewater effluent flow. Thus, the wastewater effluent flow limit is a component of WQBELs because the WQBELs are premised on a maximum level of flow. In addition, the wastewater effluent flow limit is necessary to ensure that other pollutants remain at levels that do not have a reasonable potential to exceed WQSs.

Using a facility's design flow in the derivation of pollutant effluent limitations, including conditions to limit wastewater effluent flow, is consistent with, and anticipated by NPDES permit regulations. Regarding the calculation of effluent limitations for POTWs, 40 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).

Similarly, 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 "worst-case" conditions. EPA accordingly

is authorized to carry out its reasonable potential calculations by presuming that a plant is operating at its design flow when assessing reasonable potential.

The limitation on wastewater effluent flow is within EPA's authority to condition a permit in order to carry out the objectives of the Act. *See* CWA §§ 402(a)(2) and 301(b)(1)(C); 40 C.F.R. §§ 122.4(a) and (d); 122.43 and 122.44(d). A condition on the discharge designed to protect EPA's WQBEL and reasonable potential calculations 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 anti-degradation. 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 C.F.R. § 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. Thus, the permit's wastewater effluent flow limitation is necessary to ensure proper facility operation, which in turn is a requirement applicable to all NPDES permits. *See* 40 C.F.R. § 122.41.

EPA has also included the wastewater 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 C.F.R. §§ 122.41(d) and (e).

2.4 Monitoring and Reporting Requirements

2.4.1 Monitoring Requirements

EPA has the authority in accordance with several statutory and regulatory requirements established pursuant to the CWA, 33 USC § 1251 et seq., the NPDES program (*See* § 402 and the implementing regulations generally found at 40 C.F.R. §§ 122, 124, 125, and 136), CWA § 308(a), 33 USC § 1318(a), and applicable state regulations to include requirements such as monitoring and reporting in NPDES permits.

The monitoring requirements included in this permit have been established to yield data representative of the discharges under the authority of §§ 308(a) and 402(a)(2) of the CWA, and consistent with 40 C.F.R. §§ 122.41(j), 122.43(a), 122.44(i) and 122.48. The monitoring requirements included in this permit specify routine sampling and analysis, which will provide ongoing, representative information on the levels of regulated constituents in the wastewater discharge streams. The monitoring program is needed to assess effluent characteristics, evaluate permit compliance, and determine if additional permit conditions are necessary to ensure compliance with technology-based and water quality-based requirements, including WQSs. 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 § 304(a)(1) of the CWA, 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 C.F.R. § 122. Therefore, the monitoring requirements in this permit are included for specific regulatory use in carrying out the CWA.

NPDES permits require that the approved analytical procedures found in 40 C.F.R. § 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*.[2] 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 C.F.R. § 122.21(e)(3) (completeness), 40 C.F.R. § 122.44(i)(1)(iv) (monitoring requirements) and/or as cross referenced at 40 C.F.R. § 136.1(c) (applicability) indicate that an EPA-approved method is sufficiently sensitive where:

- The method minimum level[3] (ML) is at or below the level of the applicable water quality criterion or permit limitation 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 EPA-approved analytical methods.

[2] Federal Register, Vol. 79, No. 160, Tuesday, August 19, 2014; FR Doc. 2014–19557.

[3] 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* Federal Register, Vol. 79, No. 160, Tuesday, August 19, 2014; FR Doc. 2014–19557.

2.4.2 Reporting Requirements

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

NetDMR is a national web-based tool for regulated CWA permittees to submit DMRs electronically via a secure internet application to EPA through the Environmental Information Exchange Network. NetDMR has allowed participants to discontinue mailing in hard copy forms to EPA under 40 C.F.R. §§ 122.41 and 403.12. NetDMR is accessible through EPA's Central Data Exchange at https://cdx.epa.gov/.

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 Anti-backsliding

A permit may not be renewed, reissued or modified with less stringent limitations or conditions than those contained in a previous permit unless in compliance with the anti-backsliding requirements of the CWA. See §§ 402(o) and 303(d)(4) of the CWA and 40 C.F.R. § 122.44(l)(1 and 2). Anti-backsliding provisions apply to effluent limits based on technology, water quality, Best Professional Judgment (BPJ) and state certification requirements.

All proposed limitations in the Draft Permit are at least as stringent as limitations included in the 2011 Permit unless specific conditions exist to justify one of the exceptions listed in 40 C.F.R. § 122.44(l)(2)(i) and/or in accordance with § 303(d)(4). Discussion of any applicable exceptions are discussed in sections that follow. Therefore, the Draft Permit complies with the anti-backsliding requirements of the CWA.

3 Description of Facility and Discharge

3.1 Location and Type of Facility

The location of the treatment plant and the outfall 001 to Sandy Bay are shown in Figure 1 (see attached). The latitude and longitude of the outfall is 42.662ºN, 70.616ºW.

Rockport Wastewater Treatment Facility (WWTF) is an activated sludge secondary wastewater treatment facility that is engaged in the collection and treatment of municipal wastewater. The Facility serves approximately 5,000 residents in the Town of Rockport.

The Facility has a design flow of 0.8 MGD and the average monthly flow during the review period was 0.654 MGD. The system is a separate system with no combined sewers. Wastewater is comprised of mostly domestic sewage with some commercial sewage and septage.

The Permittee does not have any significant industrial users contributing industrial wastewater to the WWTF and is not required to have a pretreatment program. 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 February 2014 through December 2018 is provided in Appendix A of this Fact Sheet.

3.1.1 Treatment Process Description

Rockport WWTF is an activated sludge secondary treatment plant. Influent enters the Facility and flows through a mechanical screen. Flow then enters an extended aeration tank for biological treatment. The remaining solids that settle out are split in to two waste streams. One of the waste streams is returned to the aeration tank as return activated sludge, and the other is sent to an aerobic digester. After exiting the aeration tank, flow enters the clarifier where solids settle out. A chlorine contact chamber follows prior to being discharged into Sandy Bay. A flow diagram of the Treatment Facility is shown in Figure 2 (see attached).

Waste sludge is pumped from the secondary clarifier to the aerobic digester and then is dewatered using belt filter presses. The dried sludge is transported under contract with Agresource, Inc. for composting and land application. The annual average mass of sludge disposal is 255.3 dry metric tons based on the 2015 permit application.

3.1.2 Collection System Description

Rockport 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 Description of Receiving Water and Dilution

The Rockport WWTF discharges through Outfall 001 into Sandy Bay. The portion of Sandy Bay receiving the discharge is located within Rockport Harbor, inside the line from Gully Point to Granite Pier. This is identified as Segment MA93-57 and covers an area of 0.35 square miles.

This portion of Sandy Bay has been classified as a Class SB Shellfishing in the Massachusetts WQSs, 314 Code of Massachusetts Regulations (“CMR”) 4.06. The MA WQS at 314 CMR 4.05(4)(b) state that Class SB, “*waters are designated as habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.”*

The MassDEP's Massachusetts Year 2014 Integrated List of Waters (2014 Integrated List), the 303(d) list, identifies this portion of Sandy Bay as a Massachusetts Category 4a Water which means a TMDL has been completed[4]. The TMDL is for fecal coliform and enterococci. The wasteload allocation for fecal coliform and enterococci are set at the WQS (*See* Table 1).

Table 1: Pathogen TMDL Summary
(Adapted from Final Pathogen TMDL for the North Coastal Watershed, p. xiv*)*

Surface Water Classification	Pathogen Source	Wasteload Allocation Indicator Bacteria (cfu/100 mL)
SB (approved for shellfishing with depuration)	Any regulated discharge – including stormwater runoff subject to Phase I or II NPDES permits, NPDES wastewater treatment plant discharges, and combined sewer overflows.	Fecal Coliform ≤ median or geometric mean, MPN, of 88 organisms per 100 mL nor shall 10% of the samples be ≥ 260 organisms per 100 mL
SA & SB (Beaches and non-designated Shellfish areas)	Any regulated discharge – including stormwater runoff subject to Phase I or II NPDES permits, NPDES wastewater treatment plant discharges, and combined sewer overflows.	Enterococci - geometric mean ≤ 35 colonies per 100 mL and single sample ≤ 104[1] colonies per 100 mL

4.1 Available Dilution

To ensure that discharges do not cause or contribute to violations of WQS under all expected circumstances, WQBELs are derived assuming critical conditions for the receiving water (*See* EPA Permit Writer's Manual, Section 6.2.4). Massachusetts water quality regulations state that the MassDEP "will establish extreme hydrological conditions at which aquatic life criteria must be applied on a case-by-case basis." (314 CMR 4.03(3)(c)).

The Rockport WWTF discharge is located approximately 650 feet offshore at a depth of 25 feet below the surface.

The previous permit relied on mathematical modeling using EPA's UPLUME model which resulted in a dilution of 35.2:1. However, a more recent dye study[5] was conducted by the U.S. Public Health Service, Food and Drug Administration in collaboration with the Massachusetts Division of Marine Fisheries to assist Marine Fisheries with the management of shellfish growing area management. This study cited an initial dilution ratio of 23:1 which, as shown below, is equivalent to a dilution factor of 24.

$$\text{Dilution factor} = (\text{Ambient flow} + \text{Effluent flow}) / \text{Effluent flow}$$

[4] MassDEP, USEPA New England, ENSR International, 2012, "Final Pathogen TMDL for the North Coastal Watershed"

[5] USPHS, FDA, Div. of Cooperative Programs in collaboration with Massachusetts DFWELE, Div. of Marine Fisheries, 2000, "Coastal Hydrography of Rockport, MA Wastewater Effluent"

Effluent flow = 1 parts

Ambient flow = 23 part

Dilution factor = (23 + 1) / 1 = 24

In developing effluent limits for the Draft Permit, EPA relied upon the dilution factor of 24 based on this more recent dye study.

5 Proposed Effluent Limitations and Conditions

The proposed limitations and conditions, the bases of which are discussed throughout this Fact Sheet, may be found in Part I of the Draft Permit. EPA determined the pollutants of concern based on EPA's technology based effluent requirements, pollutants believed present in the permit application, and other information.

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 their permit application as well as in monthly discharge monitoring reports (DMRs) and in WET test reports from February 2014 to December 2018 (the "review period") were used to identify the pollutants of concern and to characterize the discharge (*See* Appendix A).

5.1.1 Wastewater Effluent Flow

The effluent flow limit in the 2011 Permit is 0.8 MGD, as a rolling annual average flow, based on the Facility's design flow. The DMR data during the review period shows that there have been no violations of the flow limit.

The Draft Permit continues the 0.8 MGD flow limit from the 2011 Permit. 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 BOD_5 limits in the 2011 Permit were based on the secondary treatment standards in 40 C.F.R. § 133.102; the average monthly limit is 30 mg/L and the average weekly limit is 45 mg/L.

The DMR data during the review period shows that there has been one violation of BOD_5 concentration limits.

The Draft Permit proposes the same BOD_5 concentration limits as in the 2011 Permit as no new WLAs have been established and there have been no changes to the secondary treatment

standards. The monitoring frequency remains once per week.

5.1.2.2 BOD_5 Mass Limits

The mass-based BOD_5 limits in the 2011 Permit of 200 lb/day (average monthly) and 300 lb/day (average weekly) were based on EPA's secondary treatment standards and the design flow of the Facility.

The DMR data from the review period shows that there have been two violations of BOD_5 mass limits.

The mass-based BOD_5 limits are calculated at the Facility's design flow of 0.8 MGD, based on the following equation:

$$L = C_d * Q_d * 8.34$$

Where:

L = Maximum allowable load in lb/day
C_d = Maximum allowable effluent concentration for reporting period in mg/L (reporting periods are average monthly and average weekly)
Q_d = Annual average design flow of Facility
8.34 = Factor to convert effluent concentration in mg/L and design flow in MGD to lb/day

Limits:

Average Monthly: 30 mg/L * 0.8 MGD * 8.34 = 200 lb/day
Average Weekly: 45 mg/L* 0.8 MGD * 8.34 = 300 lb/day

The Draft Permit continues the BOD_5 mass limits from the 2011 Permit.

5.1.3 Total Suspended Solids (TSS)

5.1.3.1 TSS Concentration Limits

TSS limits in the 2011 Permit were based on the secondary treatment standards in 40 C.F.R. § 133.102; the average monthly limit is 30 mg/L, and the average weekly limit is 45 mg/L.

The DMR data during the review period shows that there have been two violation of TSS concentration limits.

The Draft Permit proposes the same TSS concentration limits as in the 2011 Permit as no new WLAs have been established and there have been no changes to the secondary treatment standards. The monitoring frequency remains once per week.

5.1.3.2 TSS Mass Limits

The mass-based TSS limits in the 2011 Permit of 200 lb/day (average monthly) and 300 lb/day (average weekly) were based on EPA's secondary treatment standards and the design flow of the Facility.

The DMR data during the review period shows that there have been three violations of TSS mass limits.

Mass-based TSS limits are calculated at the design flow of 0.8 MGD, based on the following equation:

$$L = C_d * Q_d * 8.34$$

Where:

L = Maximum allowable load in lb/day
C_d = Maximum allowable effluent concentration for reporting period in mg/L (reporting periods are average monthly and average weekly)
Q_d = Annual average design flow of Facility
8.34 = Factor to convert effluent concentration in mg/L and design flow in MGD to lb/day

Limits:

Average Monthly: 30 mg/L * 0.8 MGD * 8.34 = 200 lb/day
Average Weekly: 45 mg/L* 0.8 MGD * 8.34 = 300 lb/day

The Draft Permit continues the TSS mass limits from the 2011 Permit.

5.1.4 Eighty-Five Percent (85%) BOD_5 and TSS Removal Requirement

In accordance with the provisions of 40 C.F.R. § 133.102(a)(3), (4) and (b)(3), the 2011 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 BOD_5 and TSS removal percentages averaged 92% and 93%, respectively. There was one violation of the 85% removal requirement for both BOD_5 and 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 Massachusetts WQS at 314 CMR 4.05(3)(b)(3), the 2011 Permit requires that the pH of the effluent is not less than 6.5 or greater than 8.5 standard units at any time. The monitoring frequency is once per day. The DMR data during the review period show that there have been nine violations of the pH minimum limit.

The pH requirements in the 2011 Permit are carried forward into the Draft Permit as there has been no change in the WQS for pH.

5.1.6 Bacteria

The 2011 Permit included fecal coliform effluent limits to protect shellfishing uses and *enterococci* effluent limits to protect recreational uses.

The 2011 fecal coliform effluent limits are a monthly geometric mean limit of 88 colony forming units (cfu) per 100 mL, a maximum daily limit of 400 cfu per 100 mL and a requirement that no more than 10% of the samples collected monthly exceed 260 cfu per 100 mL. The DMR data from the review period shows that there have been two violations of the monthly geometric mean fecal coliform bacteria effluent limitation and three violations of the maximum daily limitation.

The 2011 e*nterococci* limits based on the water quality criteria in the MA SWQS at 314 CMR 4.05(4)(b)4.b are a monthly geometric mean of 35 cfu per 100 mL with a maximum daily of 276 cfu per 100 mL. MassDEP interprets its water quality standards to use the respective 90th percentile SSM criterion of 276 cfu per 100 mL as the maximum daily effluent limitations for NPDES discharges to receiving waters that are not designated beach areas. The DMR data during the review period shows that there have been three violations of the monthly geometric mean limitation and two violations of the maximum daily limitation.

The Draft Permit proposes effluent limits for bacteria that are consistent with the Pathogen TMDL (see Section 4 above) and MA WQS. The fecal bacteria limits are a monthly geometric mean or geometric mean Most Probable Number (MPN) of 88 organisms per 100 mL and a maximum daily limit of 260 organisms per 100 mL. The *enterococci* limits are a monthly geometric mean of 35 colonies per 100 mL and a maximum daily limit of 276 colonies per 100 mL. The sampling frequency for fecal coliform and enterococci are two times per week, which is the same as in the 2011 Permit.

5.1.7 Total Residual Chlorine

The Permittee uses chlorine disinfection. The 2011 Permit includes effluent limitations for total residual chlorine (TRC) of 0.26 mg/L (average monthly) and 0.46 mg/l (maximum daily). The DMR data from the review period show that there have been no violations of the TRC limitations.

The TRC permit limits are based on the instream chlorine criteria defined in *National Recommended Water Quality Criteria: 2002*, EPA 822R-02-047 (November 2002), as adopted by the MassDEP into the state water quality standards at 314 CMR 4.05(5)(e). These marine water instream criteria for chlorine are 7.5 µg/l (chronic) and 13 µg/l (acute). Because the ambient chlorine concentration 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 * 24 = 264 µg/l = 0.18 mg/L (average monthly)

Acute criteria * dilution factor = Acute limit
13 µg/l * 24 = 458 µg/l = 0.31 mg/L (maximum daily)

These limits are included in the Draft Permit.

5.1.8 Ammonia

Nitrogen in the form of ammonia can reduce the receiving water's dissolved oxygen concentration through nitrification and can be toxic to aquatic life, particularly at elevated temperatures. The toxicity level of ammonia in marine waters depends on the temperature, pH and salinity of the receiving water (USEPA 1989). The applicable ammonia water quality criteria are pH and, for the chronic criteria, temperature dependent and can be derived using EPA-recommended ammonia criteria from the document: *Ambient Water Quality Criteria for Ammonia (Saltwater),* 1989 (EPA 440/5-88-004). These are the marine ammonia criteria in EPA's *National Recommended Water Quality Criteria,* 2002 (EPA 822-R-02-047) document, which are included by reference in the Massachusetts WQS (*See* 314 CMR 4.05(5)(e)).

The 2011 Permit does not include ammonia limits but does require effluent ammonia monitoring twice per year as part of the Whole Effluent Toxicity (WET) testing.

EPA assumes an ambient pH of 7.5 S.U., ambient salinity of 30 ppt and ambient temperature of 25° C for the warm weather period and 5° C for the cold weather period. Based on these assumptions, the applicable ammonia criteria were determined from the tables in the WQS, interpolating between values as necessary, and are presented in Appendix B.

To determine whether the effluent has the reasonable potential to cause or contribute to an exceedance above the in-stream water quality criteria for ammonia, EPA uses the procedure and mass balance equation presented in Appendix B to project the concentration downstream of the discharge and, if applicable, to determine the limit required in the permit.

Based on the analysis in Appendix B, there is not reasonable potential for ammonia to cause an exceedance of the acute or chronic water quality criteria for either the warm weather or cold weather seasons. The Draft Permit will require effluent and ambient monitoring for ammonia in the 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 fresh water ecosystems and nitrogen in marine or estuarine ecosystems. Since the receiving water is a marine water, nitrogen is the nutrient of concern and the Draft Permit requires monitoring and reporting only for nitrogen parameters during this permit cycle.

5.1.9.1 Total Nitrogen

The 2011 Permit did not require monitoring for total nitrogen. However, data is necessary to determine whether there is reasonable potential for nitrogen discharges from the Facility to cause or contribute to a violation of the Massachusetts narrative nutrient criteria in the receiving water, particularly data that characterizes aquatic life designated uses that may be affected in this area so that the narrative criteria can be interpreted numerically. In the meantime, EPA finds that quantifying the load of total nitrogen from this Facility is an important step to understanding the impact of nitrogen loading on the receiving water. The Draft Permit includes monthly monitoring and reporting requirements for total nitrate, total nitrite, total Kjeldahl nitrogen and total nitrogen. The monitoring data will provide additional information on the loading of nitrogen and the impact to Sandy Bay.

5.1.10 Metals

Dissolved fractions of certain metals in water can be toxic to aquatic life. Therefore, there is a need to limit toxic metal concentrations in the effluent where aquatic life may be impacted. For the development of the Draft Permit, EPA evaluated whether there is reasonable potential for effluent discharges to cause or contribute to exceedances of the water quality criteria for cadmium, copper, lead, nickel and zinc given the upstream hydrologic and chemical characteristics of the receiving water. The 2011 Permit did not include effluent limits for metals but required effluent monitoring as part of the WET tests. A summary of this recent monitoring data is provided in Appendix A.

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 C.F.R. § 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 B, based on EPA's National Recommended Water Quality Criteria: 2002, which are incorporated into the Massachusetts WQS by reference.

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 procedure and mass balance equation presented in Appendix B 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 B, showing that there is a reasonable potential for copper to cause or contribute to an exceedance of the in-stream water quality criteria. The results indicated that the other metals did not pose a reasonable potential. The Draft Permit reflects a limit of 90 µg/l for copper. In addition, effluent and ambient monitoring data for all metals will be required as part of the WET tests, as described below.

The Draft Permit proposes a one-year compliance schedule to achieve compliance with the copper limit.

5.1.11 Whole Effluent Toxicity

Sections 402(a)(2) and 308(a) of the CWA 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 affect aquatic life or human health.

In addition, under § 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on WQSs. Under certain narrative State WQSs, and §§ 301, 303 and 402 of the CWA, EPA and the States may establish toxicity-based limitations to implement the narrative "no toxics in toxic amounts". 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."*.

National studies conducted by the 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, EPA assumes that there is a reasonable potential for this discharge to cause or contribute to an exceedance of the "no toxics in toxic amounts" narrative water quality standard.

Further, EPA Region 1 and MassDEP[6] current toxic policy requires toxicity testing for all dischargers such as the Rockport Wastewater Treatment Plant. In this Draft Permit, the whole effluent acute effects are regulated by limiting the concentration that is lethal to 100% of the test organisms, known as the $LC_{50.}$

The 2011 Permit required acute WET testing in March and September only with one species, the

[6] Implementation Policy for the Control of Toxic Pollutants in Surface Waters, MassDEP 1990 https://www.mass.gov/lists/water-resources-policies-guidance#water-quality-

inland silverside (*Menidia beryllina)*. Results from the 2014-2018 WET tests are all in compliance with the effluent limit and the test results are provided in the DMR summary in Appendix A.

Based on the potential for toxicity from domestic and industrial contributions, the state narrative water quality criterion, the dilution factor of 24, and in accordance with EPA national and regional policy and 40 C.F.R. § 122.44(d), the Draft Permit continues the semi-annual testing requirement, the LC_{50} effluent limit of greater than or equal to 100% with the species, the inland silverside (*Menidia beryllina).*

The WET test methodology shall be in accordance with the updated EPA Region 1 WET test procedures and protocols specified in Attachment A of the Draft Permit (USEPA Region 1 Marine Acute Toxicity Test Procedure and Protocol, July 2012).

5.2 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.

5.3 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.

5.4 Operation and Maintenance of the Sewer System

The standard permit conditions for 'Proper Operation and Maintenance', found at 40 C.F.R. § 122.41(e), require the proper operation and maintenance of permitted wastewater systems and related facilities to achieve permit conditions. The requirements at 40 C.F.R. § 122.41(d) impose a 'duty to mitigate' upon the permittee, which requires that "all reasonable steps be taken to minimize or prevent any discharge violation of the permit that has a reasonable likelihood of adversity affecting human health or the environment. EPA and MassDEP maintain 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 C.F.R. § 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.

5.5 Standard Conditions

The standard conditions of the permit are based on 40 C.F.R. §122, Subparts A, C, and D and 40 C.F.R. § 124, Subparts A, D, E, and F and are consistent with management requirements common to other permits.

6 Federal Permitting Requirements

6.1 Ocean Discharge Act

EPA has determined that the Rockport WWTF is seaward of the territorial sea baseline and, therefore is subject to the requirements of Section 403 of the Clean Water Act (CWA). Prior to Draft Permit development, as required by Section 403(c) of the CWA, EPA assessed the effect of Rockport's WWTF effluent on diversity, productivity and stability of the ocean's ecosystem in the vicinity of the outfall. On the basis of the limited available information, EPA determined that the treatment plant discharge, as regulated by this permit, should not cause unreasonable degradation of the marine environment. This determination was made in accordance with 40 C.F.R. 125, Subpart M (Ocean Discharge Criteria) and a summary of EPA's findings is included in Appendix C.

As required by 40 C.F.R. 125.123(d)(4), the Draft Permit contains a clause stating that the permit will be modified or revoked at any time if new data indicates that there may be unreasonable degradation of the marine environment.

6.2 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 Section 7 consultations for freshwater species. The National Marine 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 Rockport WWTF, which discharges through Outfall 001 into Sandy Bay at latitude 42.662ºN, longitude 70.616ºW. The portion of Sandy Bay receiving the discharge is located within Rockport Harbor, inside the line from Gully Point to Granite Pier. This is identified as Segment MA93-57 and covers an area of 0.35 square miles. The outfall is approximately 525 feet offshore and located close to the sea floor where depths rapidly change from 10 to 30 feet in depth. At high tide, the outfall is at 30 feet depth. Sandy Bay is generally 45-60 feet deep. The Rockport outfall is in a body of water generally opened to the ocean on north and east directions. The currents in Sandy Bay appear to be complex and variable.[7]

As the federal agency charged with authorizing the discharge from this Facility, EPA determines potential impacts to federally listed species, and initiates consultation, 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. For protected species under the jurisdiction of the USFWS, one listed endangered species, the roseate tern (*Sterna dougallii dougallii*), and two threatened species, the northern long-eared bat (*Myotis septentrionalis*) and the small whorled pogonia (*Isotria medeoloides*) were identified as potentially occurring in the action area of Sandy Bay.[8]

According to the USFWS, the endangered roseate tern is found along the coast of Massachusetts from late April through early September, during their breeding season. Roseate terns nest on small barrier islands, often at ends or breaks. They nest in hollows or under dense vegetation, debris or rocks hidden from predators. This species does not interact with the deepwater marine discharge, so there is no direct effect on these coastal birds. Further, the permit action is also expected to have no indirect effect on the species because it is not expected to impact small fish in shallow or near surface water, primarily the American sand lance in, which is the main prey of the northeastern populations of the species. Therefore, the proposed permit action is deemed to have no impact on this listed species.

The threatened northern long-eared bat is found in "winter – mines and caves, summer – wide variety of forested habitats. This species is not aquatic, so the deepwater marine discharge will have no direct effect on this mammal. Further, the permit action is also expected to have no

[7] USPHS, FDA, Div. of Cooperative Programs in collaboration with the Massachusetts DFWELE, Div. of Marine Fisheries. 2000. *Coastal Hydrography of Rockport, MA Wastewater Effluent.*
[8] See §7 resources for USFWS at https://ecos.fws.gov/ipac/.

indirect effect on the species because it is not expected to impact insects, the primary prey of the northern long-eared bat. Therefore, the proposed permit action is deemed to have no impact on this listed species.

The threatened small whorled pogonia is found in dry woodland and upland sites that are generally in second or third growth stage mixed forests [9]. This species is not marine, so the deepwater marine discharge will have no direct effect on this plant. Therefore, the proposed permit action is deemed to have no impact on this listed species.

Based on the review of the habitat of the species under the jurisdiction of the USFWS listed above, EPA has determined that none of the federally protected species or their critical habitat overlap with the action area of the Rockport WWTF. Therefore, ESA section 7 consultation will not be required for these species.

Regarding protected species under the jurisdiction of NOAA Fisheries, a number of anadromous and marine species and life stages likely overlap the action area of the Rockport WWTF. Subadult and adult life stages of Atlantic sturgeon (*Acipenser oxyrinchus*), adult shortnose sturgeon (*Acipenser brevirostrom*), adult and juvenile life stages of the following sea turtles - leatherback sea turtles (*Dermochelys coriacea*), loggerhead sea turtles (*Caretta caretta*), Kemp's ridley sea turtles (*Lepidochelys kempii*), green sea turtles (*Chelonia mydas*); adult and juvenile life stages of the following whales - North Atlantic right whales (*Eubalaena glacialis*) and fin whales (*Balaenoptera physalus*) are all expected to be present off the coast of Rockport in the vicinity of the action area. In addition, this coastal area has been designated as critical habitat for North Atlantic right whale feeding.[10] These protected species life stages, as well as the listed North Atlantic right whale critical habitat, are likely influenced by the discharge from this Facility.

Because these species may be affected by the discharge authorized by the proposed permit, EPA has evaluated the potential impacts of the permit action on these anadromous and marine species. 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 the immediate coast near Rockport in the vicinity of the action area of the discharge. In addition, EPA has made the preliminary determination that the proposed action may affect, but is not likely to adversely affect, the designated North Atlantic right whale critical habitat that overlaps 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 a letter that will be sent to NOAA Fisheries Protected Resources Division under separate cover.

Reinitiation of consultation will take place: (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

[9] https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=Q1XL
[10] See §7 resources for NMFS at https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=1bc332edc5204e03b250ac11f9914a27

considered in the consultation; (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 the consultation; or (c) if a new species is listed or critical habitat is designated that may be affected by the identified action.

6.3 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 Marine Fisheries Service (NMFS) 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).

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, 50 C.F.R. § 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.

The Federal action being considered in this case is EPA's proposed NPDES permit for the Rockport WWTF, which discharges through Outfall 001 into Sandy Bay at latitude 42.662ºN, longitude 70.616ºW. The portion of Sandy Bay receiving the discharge is located within Rockport Harbor, inside the line from Gully Point to Granite Pier. This is identified as Segment MA93-57 and covers an area of 0.35 square miles. The Draft Permit is intended to replace the 2011 Permit in governing the Facility.

A review of the relevant essential fish habitat information provided by NOAA Fisheries indicates that the outfall exists within designated EFH for 31 federally managed species and one Habitat Area of Particular Concern. The EFH species and life stages are listed in Table 2.

Table 2: EFH species and life stages in the vicinity of Rockport WWTF

Outfall at Latitude 42.662°N, Longitude 70.616°W

Species/Management Unit	Lifestage(s) Found at Location
Atlantic Sea Scallop	ALL
Atlantic Wolffish	ALL
Haddock	Juvenile
Winter Flounder	Eggs, Juvenile, Larvae/Adult
Little Skate	Juvenile, Adult
Ocean Pout	Adult, Eggs, Juvenile
Atlantic Herring	Juvenile, Adult
Atlantic Cod	Larvae, Adult, Juvenile, Eggs
Pollock	Juvenile
Red Hake	Adult, Eggs/Larvae/Juvenile
Silver Hake	Eggs/Larvae, Adult
Yellowtail Flounder	Adult, Juvenile, Larvae
Monkfish	Adult, Eggs/Larvae, Juvenile
White Hake	Larvae, Adult, Eggs, Juvenile
Windowpane Flounder	Adult
Winter Skate	Juvenile
American Plaice	Adult, Juvenile
Acadian Redfish	Larvae
Thorny Skate	Juvenile
Bluefin Tuna	Adult, Juvenile
Basking Shark	ALL
Porbeagle Shark	ALL
Northern Shortfin Squid	Adult
Longfin Inshore Squid	Juvenile, Adult
Atlantic Mackerel	Juvenile, Adult
Atlantic Butterfish	Adult, Juvenile
Spiny Dogfish	Adult Male
Atlantic Surfclam	Juvenile, Adult
Ocean Quahog	Juvenile, Adult
Scup	Juvenile, Adult
Black Sea Bass	Adult
Habitat Area of Particular Concern Name	
Inshore 20m Juvenile Cod	

EPA's Finding of all Potential Impacts to EFH Species

- 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 Sandy Bay or Rockport Harbor, so no life stages of EFH species are vulnerable to impingement or entrainment;
- The outfall is approximately 525 feet offshore and is approximately 30 feet depth. The outfall is in a body of water generally opened to the ocean on north and east directions. The currents in Sandy Bay appear to be complex and variable. [11] This will likely facilitate complete mixing of the effluent.
- Acute toxicity tests will be conducted twice a year to ensure that the discharge does not present toxicity problems;
- The effluent has a dilution factor calculated as 24;
- Total suspended solids, biochemical oxygen demand, total residual chlorine, fecal coliform, *Enterococci*, pH and total recoverable copper 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;
- The effluent limitations and conditions in the Draft Permit were developed to be protective of all aquatic life; and
- The Draft Permit prohibits violations of the state water quality standards.

EPA believes that the conditions and limitations contained within the Rockport WWTF Draft Permit adequately protects all aquatic life, including those species with designated EFH in the receiving water, as well as 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 will be contacted and an EFH consultation will be re-initiated.

In addition to this Fact Sheet and the Draft Permit, information to support EPA's finding is included in a letter under separate cover that will be sent to the NOAA Fisheries Habitat Division during the public comment period.

6.4 Coastal Zone Management (CZM) Consistency Review

The regulation at 40 C.F.R. § 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 C.F.R. 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

[11] USPHS, FDA, Div. of Cooperative Programs in collaboration with the Massachusetts DFWELE, Div. of Marine Fisheries. 2000. *Coastal Hydrography of Rockport, MA Wastewater Effluent.*

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 September 22, 2015 to the Massachusetts 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 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:

Betsy Davis
EPA New England, Region 1
5 Post Office Square, Suite-100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1576, FAX: (617) 918-0576
Email: davis.betsy@epa.gov

Claire A. Golden
Massachusetts Department of Environmental Protection
205B Lowell Street
Wilmington, MA 01887
Telephone: (978) 694-3244 FAX: (978) 694-3498
Email: claire.golden@mass.gov

Prior to the close of the public comment period, any person, may submit a written request to EPA and the State Agency 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 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the 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, the 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. The Final Permit is jointly issued by EPA and MassDEP under federal and state law, respectively, and constitutes two separate and independent permit authorizations: 1) a federal NPDES Permit issued by EPA pursuant to the Federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*; and 2) a state surface water discharge permit issued by MassDEP pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 25-53, and 314 C.M.R. 3.00. 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 C.F.R. § 124.19. An appeal of the state permit may be commenced by submitting a request for an adjudicatory hearing to MassDEP's Office of Appeals and Dispute Resolution consistent with 310 CMR 1.00.

8 Administrative Record

The administrative record on which this Draft Permit is based may be accessed at EPA's Boston office between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from Betsy Davis, EPA Region 1, 5 Post Office Square, Suite-100 (06-1), Boston, MA 02109-3912 or via email at davis.betsy@epa.gov .

October 2019
Date

Ken Moraff, Director
Water Divison
U.S. Environmental Protection Agency

Figure 1: Location of Rockport Wastewater Treatment Facility

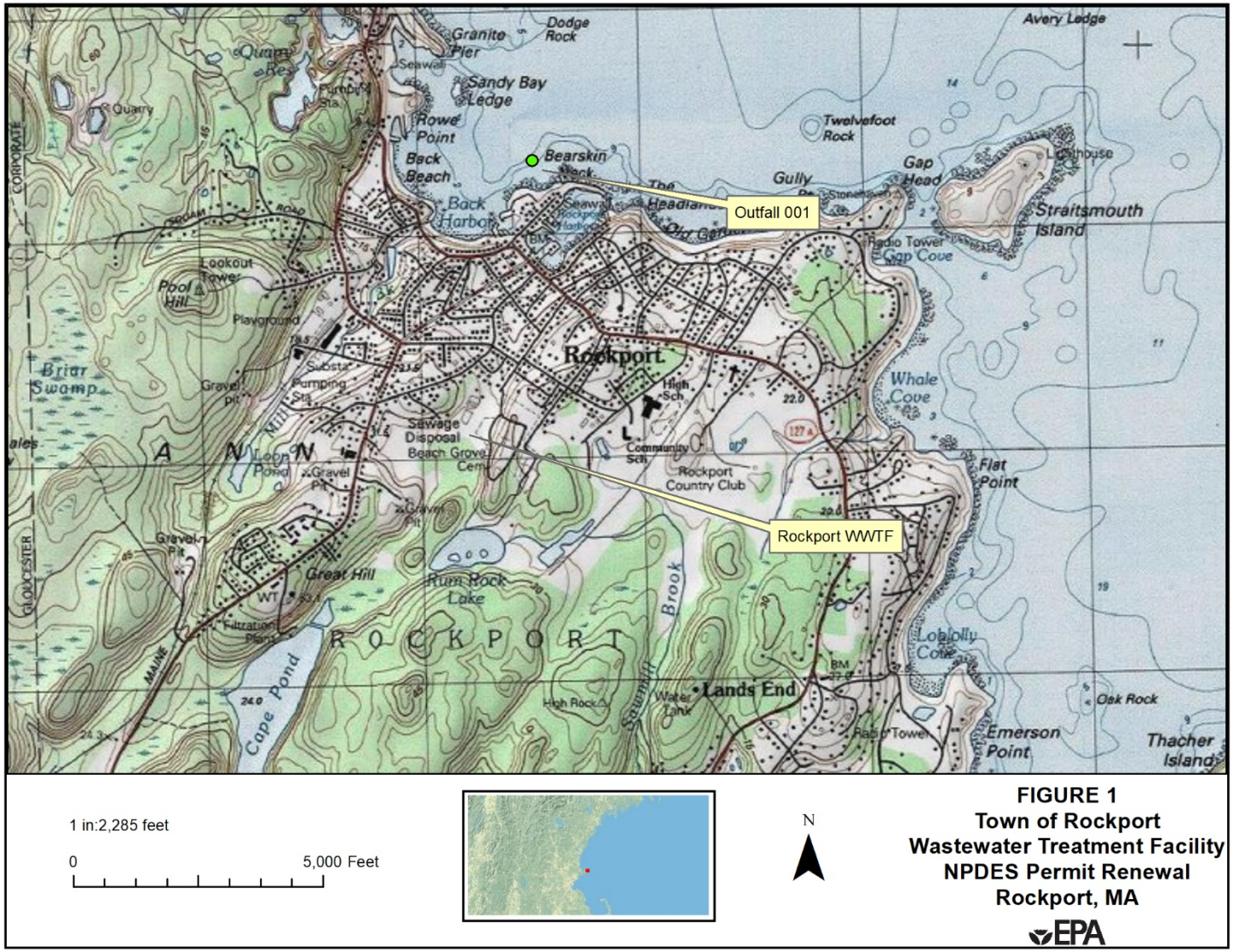
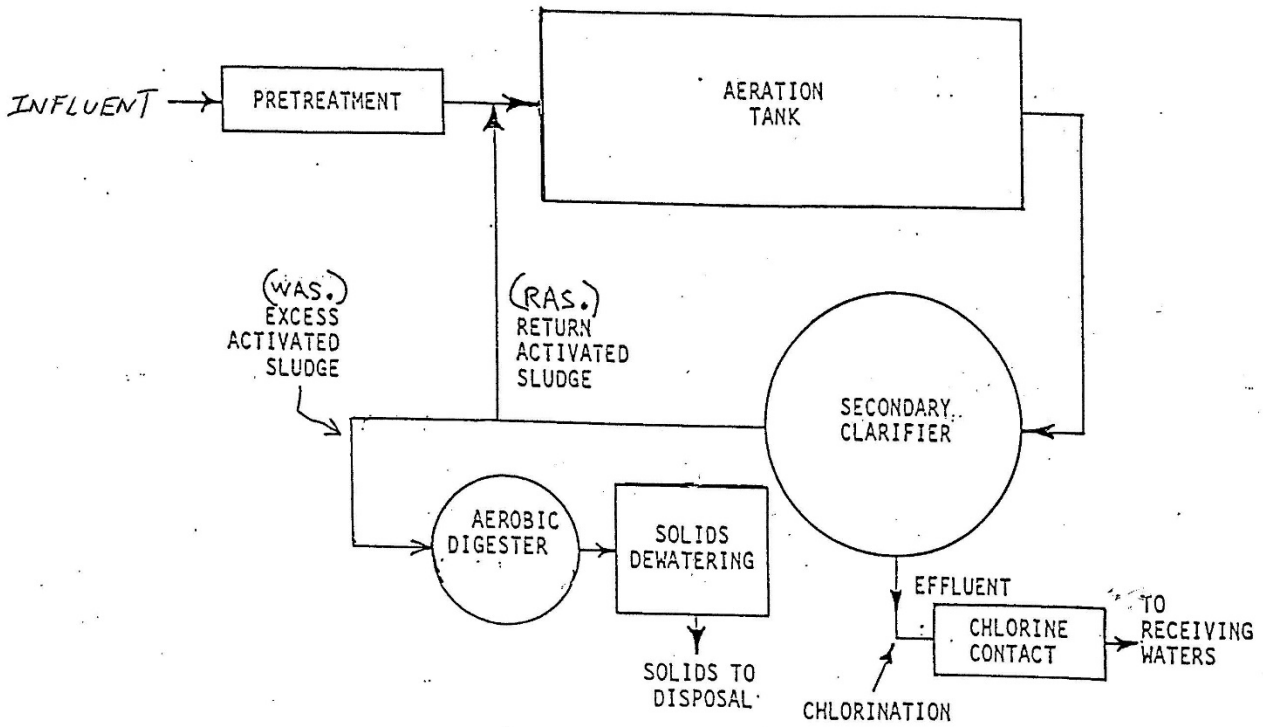


Figure 2: Flow Diagram



Outfall 001

Parameter	Flow	Flow	Flow	BOD5	BOD5	BOD5	BOD5	BOD5
	Annual Rolling Ave	Monthly Ave	Daily Max	Monthly Ave	Monthly Ave	Weekly Ave	Weekly Ave	Daily Max
Units	MGD	MGD	MGD	lb/d	mg/L	lb/d	mg/L	mg/L
Effluent Limit	0.8	Report	Report	200	30	300	45	Report
Minimum	0.3	0.39	0.4	12	4	15	5	5
Maximum	0.709	1.4	4.1	244	24	382	63	63
Average	0.626	0.654	1.22	69.7	12.5	103	16.1	16.1
No. of Violations	0	N/A	N/A	1	0	1	1	N/A
2/28/2014	0.6	0.9	1.9	68	11	100	13	13
3/31/2014	0.6	0.8	3.4	63	13	67	13	13
4/30/2014	0.6	0.9	1.6	87	11	99	11	12
5/31/2014	0.7	0.6	1.1	64	11	109	11	12
6/30/2014	0.6	0.6	0.7	59	12	67	13	13
7/31/2014	0.6	0.6	1.2	53	12	57	13	13
8/31/2014	0.6	0.5	0.6	41	11	45	12	12
9/30/2014	0.6	0.4	0.5	30	10	31	10	10
10/31/2014	0.6	0.6	2.2	43	12	62	14	14
11/30/2014	0.7	0.9	1.7	72	12	90	14	14
12/31/2014	0.7	1.3	3.1	109	12	136	13	13
1/31/2015	0.7	0.7	1.3	57	11	70	12	12
2/28/2015	0.7	0.5	0.5	44	12	52	13	13
3/31/2015	0.7	1.1	2.4	87	12	113	13	13
4/30/2015	0.7	1	2.1	100	12	144	13	13
5/31/2015	0.7	0.5	0.7	45	11	48	12	12
6/30/2015	0.7	0.6	1.3	56	14	63	15	15
7/31/2015	0.7	0.6	0.9	58	12	87	13	13
8/31/2015	0.7	0.5	0.5	37	10	39	10	10
9/30/2015	0.7	0.4	1.1	34	10	38	11	11
10/31/2015	0.7	0.4	0.7	45	12	64	14	14
11/30/2015	0.7	0.5	0.7	44	12	53	12	12
12/31/2015	0.6	0.7	1.5	79	13	157	14	14
1/31/2016	0.6	0.7	1.2	61	12	70	13	13
2/29/2016	0.7	0.9	1.8	76	12	107	12	12
3/31/2016	0.6	0.9	1.9	65	11	75	12	12
4/30/2016	0.6	0.7	0.9	55	11	72	11	11
5/31/2016	0.6	0.5	0.7	44	10	60	11	11
6/30/2016	0.6	0.5	0.6	44	12	48	12	12
7/31/2016	0.6	0.4	0.6	37	10	40	11	11
8/31/2016	0.6	0.4	0.5	38	11	39	11	11

Outfall 001

Parameter	Flow	Flow	Flow	BOD5	BOD5	BOD5	BOD5	BOD5
	Annual Rolling Ave	Monthly Ave	Daily Max	Monthly Ave	Monthly Ave	Weekly Ave	Weekly Ave	Daily Max
Units	MGD	MGD	MGD	lb/d	mg/L	lb/d	mg/L	mg/L
Effluent Limit	0.8	Report	Report	200	30	300	45	Report
9/30/2016	0.6	0.4	0.4	30	10	36	12	12
10/31/2016	0.6	0.4	0.8	14	4	15	5	5
11/30/2016	0.6	0.4	0.8	12	4	19	6	6
12/31/2016	0.6	0.6	0.8	103	18	294	63	63
1/31/2017	0.6	1	0.8	113	11	152	13	13
2/28/2017	0.6	0.9	0.8	95	13	109	15	15
3/31/2017	0.5	0.7	0.8	76	13	110	14	14
4/30/2017	0.6	1.3	3.1	181	15	282	19	19
5/31/2017	0.6	0.8	1	145	13	182	13	13
6/30/2017	0.7	0.8	1.4	74	12	101	13	13
7/31/2017	0.7	0.544	0.653	51	12	282	13	13
8/31/2017	0.709	0.446	0.519	41	11	46	12	12
9/30/2017	0.3	0.39	0.474	38	12	42	13	13
10/31/2017	0.4	0.4	0.6	37	11	57	11	11
11/30/2017	0.4	0.4	0.6	44	12	48	13	13
12/31/2017	0.7	0.5	0.8	45	12	56	12	12
1/31/2018	0.7	0.6	1.87	70	13	141	18	18
2/28/2018	0.6	0.8	1.3	138	21	184	26	26
3/31/2018	0.7	1	2	106	12	158	17	17
4/30/2018	0.6	0.8	1.4	120	14	170	21	21
5/31/2018	0.6	0.5	0.9	135	22	296	42	42
6/30/2018	0.6	0.4	0.5	67	19	91	26	26
7/31/2018	0.6	0.4	0.6	57	14	75	20	20
8/31/2018	0.6	0.4	1.9	49	13	75	20	20
9/30/2018	0.6	0.5	0.9	95	24	127	42	42
10/31/2018	0.6	0.5	1.1	66	18	146	42	42
11/30/2018	0.7	1.4	4.1	244	17	382	31	31
12/31/2018	0.7	0.7	1.3	73	13	95	13	13

Outfall 001

Parameter	BOD5	TSS	TSS	TSS	TSS	TSS	TSS	pH
	Daily Min	Monthly Ave	Monthly Ave	Weekly Ave	Weekly Ave	Daily Max	Daily Min	Minimum
Units	% Removal	lb/d	mg/L	lb/d	mg/L	mg/L	% Removal	SU
Effluent Limit	**85**	**200**	**30**	**300**	**45**	**Report**	**85**	**6.5**
Minimum	**63**	**12**	**4**	**20**	**6**	**6**	**83**	**5.5**
Maximum	**98**	**597**	**45**	**2380**	**173**	**173**	**98**	**6.7**
Average	**91.9**	**78.3**	**13.4**	**139**	**19.2**	**19.2**	**92.6**	**6.45**
No. of Violations	**1**	**1**	**1**	**2**	**1**	**N/A**	**1**	**9**
2/28/2014	92	67	11	101	12	12	92	6.6
3/31/2014	92	66	13	71	13	14	91	6.6
4/30/2014	93	80	10	89	10	11	93	6.6
5/31/2014	94	68	12	98	12	14	93	6.7
6/30/2014	94	63	13	71	14	14	93	6.6
7/31/2014	94	51	12	58	13	13	95	6.6
8/31/2014	94	40	11	45	11	11	95	6.6
9/30/2014	95	33	11	36	12	12	94	6.6
10/31/2014	92	43	12	63	14	14	92	6.5
11/30/2014	91	68	11	84	13	13	92	6.5
12/31/2014	90	106	12	122	13	13	90	6.5
1/31/2015	93	53	11	63	12	12	93	6.5
2/28/2015	91	41	11	52	13	13	92	6.5
3/31/2015	92	79	11	109	12	12	92	6.5
4/30/2015	92	96	12	135	13	13	92	6.5
5/31/2015	94	46	11	49	12	12	94	6.6
6/30/2015	93	56	14	60	15	15	93	6.6
7/31/2015	94	58	12	89	14	14	95	6.7
8/31/2015	95	37	10	41	10	10	96	6.6
9/30/2015	94	35	10	41	11	11	95	6.7
10/31/2015	93	45	12	65	14	14	92	6.5
11/30/2015	91	43	12	54	12	12	91	6.5
12/31/2015	91	78	12	162	14	14	91	6.5
1/31/2016	90	63	12	64	12	12	90	6.5
2/29/2016	91	75	11	107	12	12	91	6.5
3/31/2016	93	65	10	77	12	12	93	6.5
4/30/2016	93	56	11	71	11	11	93	6.5
5/31/2016	94	47	11	59	11	11	94	6.5
6/30/2016	94	42	11	47	12	12	95	6.5
7/31/2016	95	36	10	38	11	11	95	6.5
8/31/2016	94	35	10	37	11	11	96	6.5

Outfall 001

Parameter	BOD5	TSS	TSS	TSS	TSS	TSS	TSS	pH
	Daily Min	Monthly Ave	Monthly Ave	Weekly Ave	Weekly Ave	Daily Max	Daily Min	Minimum
Units	% Removal	lb/d	mg/L	lb/d	mg/L	mg/L	% Removal	SU
Effluent Limit	85	200	30	300	45	Report	85	6.5
9/30/2016	95	37	12	49	17	17	94	6.4
10/31/2016	98	36	11	60	9	9	95	6.1
11/30/2016	98	23	10	49	16	16	93	6.1
12/31/2016	87	103	18	213	41	41	87	6.5
1/31/2017	94	597	45	2380	173	173	94	6.5
2/28/2017	89	195	24	280	34	34	89	5.6
3/31/2017	91	111	19	177	26	26	90	5.5
4/30/2017	89	189	15	356	24	24	90	5.8
5/31/2017	91	145	21	182	23	23	89	6.4
6/30/2017	93	129	20	160	27	27	88	6.5
7/31/2017	94	104	23	145	33	33	92	6.5
8/31/2017	90	86	23	114	33	33	90	6.5
9/30/2017	90	64	20	75	26	26	91	6.5
10/31/2017	90	52	17	99	33	33	94	6.4
11/30/2017	91	93	26	121	33	33	90	6.5
12/31/2017	91	92	22	145	28	28	95	6.5
1/31/2018	92	149	NODI:	283	NODI:	NODI:	91	6.5
2/28/2018	90	157	24	184	25	25	88	6.5
3/31/2018	92	120	13	184	16	16	90	6.5
4/30/2018	92	47	7	76	14	14	93	6.5
5/31/2018	92	43	7	99	13	13	97	6.5
6/30/2018	91	41	11	50	13	13	97	6.5
7/31/2018	92	50	11	82	16	16	95	5.6
8/31/2018	94	12	4	20	6	6	96	6.5
9/30/2018	91	17	4	26	6	6	97	6.5
10/31/2018	92	36	9	66	18	18	98	6.5
11/30/2018	63	91	7	253	20	20	83	6.7
12/31/2018	90	29	5	40	8	8	96	6.5

Outfall 001

Parameter	pH	Fecal Coliform	Fecal Coliform	TRC	TRC	Enterococci	Enterococci
	Maximum	Monthly Geometric Mean	Daily Max	Monthly Ave	Daily Max	Monthly Ave	Daily Max
Units	SU	CFU/100mL	CFU/100mL	mg/L	mg/L	CFU/100mL	CFU/100mL
Effluent Limit	**8.5**	**88**	**400**	**0.26**	**0.46**	**35**	**276**
Minimum	**6.5**	**12**	**23**	**0.19**	**0.26**	**0.25**	**0.69**
Maximum	**7.6**	**398**	**72000**	**0.26**	**0.41**	**251**	**14000**
Average	**6.8**	**37.6**	**2030**	**0.236**	**0.296**	**31.6**	**317**
No. of Violations	**0**	**2**	**3**	**0**	**0**	**3**	**2**
2/28/2014	6.6	22	37	0.24	0.27	24	32
3/31/2014	7	25	37	0.25	0.26	30	37
4/30/2014	7	23	26	0.24	0.27	26	34
5/31/2014	6.9	22	28	0.26	0.3	23	32
6/30/2014	6.9	28	41	0.25	0.3	25	43
7/31/2014	6.6	21	27	0.26	0.27	21	25
8/31/2014	6.7	22	31	0.26	0.27	26	35
9/30/2014	6.6	22	33	0.26	0.29	26	34
10/31/2014	6.6	26	32	0.25	0.27	25	36
11/30/2014	6.6	27	33	0.25	0.3	27	37
12/31/2014	6.7	22	31	0.23	0.27	24	37
1/31/2015	6.6	25	32	0.25	0.28	28	39
2/28/2015	6.5	22	26	0.26	0.27	23	27
3/31/2015	6.6	24	32	0.24	0.26	28	37
4/30/2015	6.7	23	30	0.25	0.27	25	36
5/31/2015	6.8	27	40	0.26	0.27	27	34
6/30/2015	7	30	46	0.25	0.27	32	46
7/31/2015	6.8	27	34	0.26	0.27	31	39
8/31/2015	6.9	23	25	0.25	0.26	28	33
9/30/2015	6.8	19	23	0.26	0.28	24	35
10/31/2015	6.8	26	42	0.24	0.29	26	33
11/30/2015	6.8	21	30	0.24	0.3	22	34
12/31/2015	6.8	22	38	0.23	0.3	26	33
1/31/2016	6.7	24	32	0.25	0.3	28	37
2/29/2016	6.8	26	40	0.25	0.32	29	40
3/31/2016	7	24	26	0.26	0.33	26	31
4/30/2016	6.8	25	33	0.24	0.31	28	33
5/31/2016	6.9	25	32	0.25	0.3	26	31
6/30/2016	6.8	26	32	0.26	0.41	29	39
7/31/2016	6.7	23	31	0.26	0.31	25	29
8/31/2016	6.8	21	26	0.25	0.31	26	34

Outfall 001

Parameter	pH	Fecal Coliform	Fecal Coliform	TRC	TRC	Enterococci	Enterococci
	Maximum	Monthly Geometric Mean	Daily Max	Monthly Ave	Daily Max	Monthly Ave	Daily Max
Units	SU	CFU/100mL	CFU/100mL	mg/L	mg/L	CFU/100mL	CFU/100mL
Effluent Limit	**8.5**	**88**	**400**	**0.26**	**0.46**	**35**	**276**
9/30/2016	6.7	23	30	0.22	0.29	26	29
10/31/2016	6.6	**209**	**800**	0.22	0.3	21	52
11/30/2016	6.6	38	**72000**	0.23	0.27	26	**14000**
12/31/2016	7.1	**398**	**44000**	0.26	0.3	**251**	**2100**
1/31/2017	7	41	142	0.26	0.31	**83**	151
2/28/2017	6.6	28	57	0.24	0.35	32	68
3/31/2017	6.7	12	40	0.22	0.27	13	36
4/30/2017	6.8	29	54	0.25	0.35	13	55
5/31/2017	6.7	31	55	0.22	0.3	26	60
6/30/2017	6.7	28	85	0.23	0.27	30	83
7/31/2017	6.8	33	79	0.22	0.29	33	74
8/31/2017	6.6	38	73	0.23	0.36	35	64
9/30/2017	6.6	36	56	0.23	0.29	32	52
10/31/2017	7	28	47	0.22	0.34	29	57
11/30/2017	6.5	25	46	0.21	0.27	30	50
12/31/2017	6.6	23	36	0.21	0.26	23	27
1/31/2018	6.5	25	46	0.2	0.29	0.25	0.69
2/28/2018	6.8	36	88	0.21	0.26	35	72
3/31/2018	6.7	30	55	0.22	0.32	**38**	57
4/30/2018	6.8	35	81	0.2	0.33	35	82
5/31/2018	6.8	36	60	0.19	0.29	20	25
6/30/2018	7	50	95	0.19	0.31	30	48
7/31/2018	6.9	34	58	0.21	0.33	34	50
8/31/2018	7.3	22	65	0.24	0.3	20	35
9/30/2018	6.9	44	123	0.19	0.3	35	61
10/31/2018	7.3	56	104	0.19	0.29	32	67
11/30/2018	7.6	41	106	0.22	0.33	35	81
12/31/2018	7.4	46	103	0.26	0.33	32	63

Outfall 001 (WET)

Parameter	LC50 Acute Menidia	Ammonia	Aluminum	Cadmium	Copper	Lead
	Daily Min	Daily Max	Daily Max	Daily Max	Daily Max	Daily Max
Units	%	mg/L	mg/L	mg/L	mg/L	mg/L
Effluent Limit	100	Report	Report	Report	Report	Report
Minimum	100	0.26	0.3	0.005	0.025	0.005
Maximum	100	5.3	0.96	0.005	0.142	0.005
Median	100	2.8	0.44	0.005	0.0368	0.005
No. of Violations	0	N/A	N/A	N/A	N/A	N/A
3/31/2014	100	3.80	0.3	0.005	0.102	0.005
9/30/2014	100	2.80	0.3	0.005	0.0366	0.005
3/31/2015	100	2.80	0.48	0.005	0.142	0.005
9/30/2015	100	2.30	0.3	0.005	0.0977	0.005
3/31/2016	100	1.20	0.568	0.005	0.037	0.005
9/30/2016	100	5.30	0.3	0.005	0.025	0.005
3/31/2017	100	2.40	0.68	0.005	0.035	0.005
9/30/2017	100	3.00	0.96	0.005	0.0467	0.005
3/31/2018	100	3.50	0.4	0.005	0.0277	0.005
9/30/2018	100	0.26	0.51	0.005	0.0358	0.005
3/31/2019	100	0.90	0.38	0.005	0.025	0.005

Outfall 001 (WET)

Parameter	Nickel	Zinc
	Daily Max	Daily Max
Units	mg/L	mg/L
Effluent Limit	Report	Report
Minimum	**0**	**0.0656**
Maximum	**0**	**0.183**
Median	**0**	**0.108**
No. of Violations	N/A	N/A
3/31/2014	--	0.105
9/30/2014	--	0.116
3/31/2015	--	0.106
9/30/2015	--	0.0753
3/31/2016	--	0.13
9/30/2016	--	0.0656
3/31/2017	--	0.109
9/30/2017	--	0.183
3/31/2018	--	0.0722
9/30/2018	--	0.144
3/31/2019	--	0.117

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 the *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 95th percentile of the dataset. For datasets of less than 10 samples, EPA uses the maximum value of the dataset.

EPA uses the dilution factor, the calculated upper bound of the effluent data and a concentration representative of the parameter in the receiving water outside of the zone of influence of the discharge to project the downstream concentration after complete mixing using the following simple mass-balance equation:

$$C_s(DF - 1) + C_e = C_d(DF)$$

Where:

C_s = upstream concentration (median value of available ambient data)
C_e = effluent concentration (95th percentile or maximum of effluent concentration)
C_d = downstream concentration
DF = dilution factor (See Dilution Factor section of Fact Sheet)

Solving for the downstream concentration results in:

$$C_d = \frac{C_s(DF - 1) + C_e}{DF}$$

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		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)		0.0	5.3	5.3	0.22	0.22	15.5	2.4	N	N	N/A	N/A
Ammonia (Cold)		0.0	3.8	3.8	0.16	0.16	69.5	10.6	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	24	0.0	5.0	5.0	0.2	0.2	40.2	8.9	N	N	N/A	N/A
Copper		0.0	125.2	125.2	5.2	5.2	5.8	3.7	N	**Y**	N/A	**90**
Lead		0.0	5.0	5.0	0.2	0.2	220.8	8.5	N	N	N/A	N/A
Nickel		0.0	0.0	0.0	0.0	0.0	74.7	8.3	N	N	N/A	N/A
Zinc		0.0	176.8	176.8	7.4	7.4	95.1	85.6	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). C_s equals zero for each metal because no ambient data was collected.

[2]Values represent the 95th 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). If the metal already has a limit (for either acute or chronic conditions), the value represents the existing limit.

Clean Water Act Section 403(c) Ocean Discharge Criteria Evaluation

Rockport WWTP

September 2019

I. Introduction

EPA has determined that the Rockport Wastewater Treatment Plant outfall is seaward of the territorial sea baseline and, therefore, is subject to Section 403 of the Clean Water Act (CWA).

The Ocean Discharge Criteria regulations found at 40 CFR Part 125 – Subpart M establish ocean discharge guidelines from which a permit writer must make a judgment that a discharge will, or will not, cause "unreasonable degradation" of the marine environment.

A determination of whether or not "unreasonable degradation" will occur is based on consideration of the 10 guidelines found in 40 CFR §125.122. "Unreasonable degradation" of the marine environment is defined in the Ocean Discharge Criteria as any of the following:

1. Significant adverse changes in ecosystem diversity, productivity, and stability of the biological community within the area of discharge and surrounding biological communities;

2. Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; or

3. Loss of aesthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

If a determination can be made that no "unreasonable degradation" will result, a permit is issued including appropriate conditions to ensure that unreasonable degradation does not take place. These conditions may include a requirement for an ongoing monitoring program. If EPA determines that a discharge will cause unreasonable degradation despite the application of all possible permit conditions, it may not issue a permit authorizing the discharge of pollutants.

If, because of insufficient information, a determination cannot be made prior to the issuance of a permit that no unreasonable degradation will result, then additional conditions must be satisfied.

II. Criteria Evaluation

The determination of no "unreasonable degradation" is to be made based on a consideration of the 10 guidelines found in 40 CFR § 125.122. The 10 guidelines are discussed below:

1. Quantities, composition, and potential for bioaccumulation or persistence of the pollutants to be discharged.

The Rockport WWTP has an average monthly design flow of 0.8 million gallons per day (MGD). A summary of effluent parameters taken from monthly discharge monitoring reports (DMRs) is shown in Table 1. The following is an assessment of the effluent:

a. Type: The effluent is composed mainly of domestic sewage from the Town of Rockport. The Town of Rockport is presently not required to administer a pretreatment program under 40 CFR § 122.44(j), 40 CFR § 403, and Section 307 of the Clean Water Act. However, the permit contains conditions that ensure that pollutants from industrial users will not pass through the facility and cause water quality standard violations or cause interference with the operation of the treatment facility.

b. Sources: The facility received domestic wastewater from a population of approximately 5,000 people in the Town of Rockport.

c. Amounts: The plant has an average monthly design flow of 0.8 mgd. For the period February 1, 2014, through December 31, 2018, the average monthly flow from the plant has been 0.654 mgd. For the same time frame the highest daily flows were 4.1, 3,4 and 3.1 mgd.

d. For the period from February 1, 2014, through December 31, 2018, the flows from the plant have been relatively consistent. The average yearly flows during this period have been 0.736, 0.625, 0.567, 0.682, and 0.667mgd.

e. Physical, Chemical, and Toxicological Properties: The plant provides secondary treatment for the wastewater generated within the Town. The permit contains effluent limitations and monitoring requirements for effluent flow, biochemical oxygen demand, total suspended solids, pH, total residual chlorine, total recoverable copper, Enterococci bacteria, fecal coliform bacteria, and whole effluent toxicity.

Summary:

The Rockport WWTP treats wastewater generated by the Town of Rockport to secondary standards. Secondary treatment effluent should not contain significant amounts of pollutants that bioaccummulate or that are toxic. The permit has and will continue to prohibit the discharge of pollutants in toxic amounts. The facility has been, and will continue to be, required to conduct whole effluent toxicity (WET) testing and to submit those results to EPA. The facility has been able to comply with the toxicity requirements in the past and is expected to be able to continue to operate in compliance in the future.

Table 1
Effluent Characteristics for the Period February 1, 2014, Through December 31, 2018

Effluent Parameter	Monthly Average	Range of Monthly Averages	Maximum of Daily Maximums[1]
Flow (MGD)	0.654	0.39 – 1.4	4.1, 3.4, 3.1
pH (Standard Units)[2]	N/A	5.5 – 7.6	N/A
Fecal Coliform Bacteria (colonies/100 ml)	37.6	12-398	72000, 44000, 800
Enterococci	31.6	0.25 - 251	14000, 2100, 151
Total Residual Chlorine (mg/l)	0.236	0.19 – 0.26	0.41, 0.36, 0.35
BOD_5 (mg/l)	12.5	4 – 24	63, 42, 42
BOD_5 (lb/d)	69.7	12 – 244	---
BOD_5 (% removal)	91.9	---	---
TSS (mg/l)	13.4	4 – 45	173, 41, 34
TSS (lb/d)	78.3	12 – 597	---
TSS (% removal)	92.6	---	---
LC50 (% effluent)[3] *Menidia beryllina*	---	---	100, 100, 100

1. More than one number represents the second and third highest values.
2. Numbers listed are the minimum and maximum daily readings
3. Minimums of the daily values.

2. Potential transport of pollutants by biological, physical, or chemical process.

The Rockport WWTP outfall is located in coastal waters along the almost furthest eastern point of Cape Ann. The outfall is located in Sandy Bay, just north of Rockport Harbor. The outfall is approximately 525 feet offshore and located close to the sea floor where depths rapidly change from 10 to 30 feet in depth. At high tide, the outfall is at 30 feet depth. Sandy Bay is generally 45-60 feet deep. The Rockport outfall is in a body of water generally opened to the ocean on north and east directions. The currents in Sandy Bay appear to be complex and variable. [1]

A 2000 dye study found that neither temperature or salinity restricted the effluent from traveling to the water surface of Sandy Bay as it diluted and dispersed.

The existing permit is based upon a dilution factor of 35.2 which was based on mathematical modeling with EPA's UPLUME computer model. The 2000 dye study reported an initial dilution of 23. EPA has based the effluent limits in the draft permit on a dilution of 23:1.

[1] USPHS, FDA, Div. of Cooperative Programs in collaboration with the Massachusetts DFWELE, Div. of Marine Fisheries. 2000. *Coastal Hydrography of Rockport, MA Wastewater Effluent.*

Summary:

The lack of nonconventional pollutants combined with the available dilution and subsequent dispersion makes the transport and fate of pollutants from this discharge of little concern. However, the transport and fate of bacteria from this discharge is of concern based on the proximity of public beaches and shellfish beds. This concern will be discussed late in this document.

3. Composition and vulnerability of potentially exposed biological communities, including: unique species or communities, endangered or threatened species, and species critical to the structure or function of the ecosystem.

A number of endangered or threatened species are known to inhabit the marine waters of coastal Massachusetts. These include shortnose and Atlantic sturgeon, fin whale, humpback whale, north Atlantic right whale, sei whale, green turtle, hawksbill turtle, Kemp's Ridley turtle, leatherback turtle, and the loggerhead turtle (NOAA Fisheries – GARFO). Most of these species are deep water species and would not usually come into the relatively shallow are of the discharge location. Additionally, the lack of nonconventional (i.e. toxic) pollutants in the discharge greatly reduces the potential risk to these species. EPA has made the determination that the proposed action may affect, but is not likely to adversely affect, endangered or threatened species found in the action area along with the designated North Atlantic right whale critical habitat that overlaps the action area. EPA must consult with NOAA Fisheries to document concurrence with this determination. See Section 6.2 of the Fact Sheet.

4. Importance of the receiving water are to the surrounding biological community such as spawning sites, nursery/forage area, migratory pathways, and areas necessary for critical life stages/functions of an organism.

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 Marine Fisheries Service (NOAA Fisheries) if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat," 16 U.S.C. § 1855(b).

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH, 50 C.F.R. § 600.910(a). Adverse effects may include direct (*e.g.* contamination or physical disruption), indirect (*e.g.* loss of prey, reduction in species' fecundity), or 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 Plan 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.

A review of the relevant essential fish habitat information provided by NOAA Fisheries indicates that the outfall exists within designated EFH for 31 federally managed species and one Habitat Area of Particular Concern (HAPC). The EFH species and life stages are listed in Table 2. A full discussion of potential impacts to EFH species and the HAPC is found in Section 6.3 of the Fact Sheet.

It is expected that the receiving water will also be used by species within the biological community for which there are not EFH designations for spawning, foraging, migration, and other functions.

Due to the nature of the discharge and the dispersive capabilities of the area, the impacts from the discharge on the biota are anticipated to be limited to the area immediately around the discharge point.

Table 2
EFH Species and life stages in the vicinity of Rockport WWTF
Outfall at Latitude 42.662ºN, Longitude 70.616ºW

Species/Management Unit	Lifestage(s) Found at Location
Atlantic Sea Scallop	ALL
Atlantic Wolffish	ALL
Haddock	Juvenile
Winter Flounder	Eggs, Juvenile, Larvae/Adult
Little Skate	Juvenile, Adult
Ocean Pout	Adult, Eggs, Juvenile
Atlantic Herring	Juvenile, Adult
Atlantic Cod	Larvae, Adult, Juvenile, Eggs
Pollock	Juvenile
Red Hake	Adult, Eggs/Larvae/Juvenile
Silver Hake	Eggs/Larvae, Adult
Yellowtail Flounder	Adult, Juvenile, Larvae
Monkfish	Adult, Eggs/Larvae, Juvenile
White Hake	Larvae, Adult, Eggs, Juvenile
Windowpane Flounder	Adult
Winter Skate	Juvenile
American Plaice	Adult, Juvenile
Acadian Redfish	Larvae
Thorny Skate	Juvenile
Bluefin Tuna	Adult, Juvenile
Basking Shark	ALL
Porbeagle Shark	ALL
Northern Shortfin Squid	Adult
Longfin Inshore Squid	Juvenile, Adult
Atlantic Mackerel	Juvenile, Adult

Species/Management Unit	Lifestage(s) Found at Location
Atlantic Butterfish	Adult, Juvenile
Spiny Dogfish	Adult Male
Atlantic Surfclam	Juvenile, Adult
Ocean Quahog	Juvenile, Adult
Scup	Juvenile, Adult
Black Sea Bass	Adult
Habitat Area of Particular Concern Name	
Inshore 20m Juvenile Cod	

5. The existence of special aquatic sites, including marine sanctuaries/refuges, parks, monuments, national seashores, wilderness areas, and coral reefs.

No special aquatic sites exist near the area of the proposed discharge.

6. Potential direct or indirect impacts on human health.

Massachusetts has over 1000 freshwater and marine beaches. In October 2000, Congress amended the Clean Water Act to include the Beaches Environmental Assessment and Coastal Health (BEACH) Act. Under the BEACH Act, EPA was authorized to award grants to eligible states to develop and implement monitoring and notification programs. These programs protect the public from exposure to pathogenic microorganisms in coastal recreation waters.

Since 2001, Massachusetts Department of Public Health (MDPH) beach regulations (105 CMR 445.000) have required that all public and semi-public beaches in the state be monitored for bacteria during beach season. Coastal beaches are monitored for the presence of fecal bacteria and Enterococci bacteria, which are present in the intestines of warm-blooded animals including humans. Fecal bacteria, when present in high concentrations and ingested, can commonly cause gastrointestinal illnesses such as nausea, vomiting, and diarrhea. These indicator organisms signify the possible presence of other potentially disease-causing organisms in the waterbody. The MDPH uses an instantaneous level of 104 Enterococci/100 ml as the standard for Enterococci in marine waters.

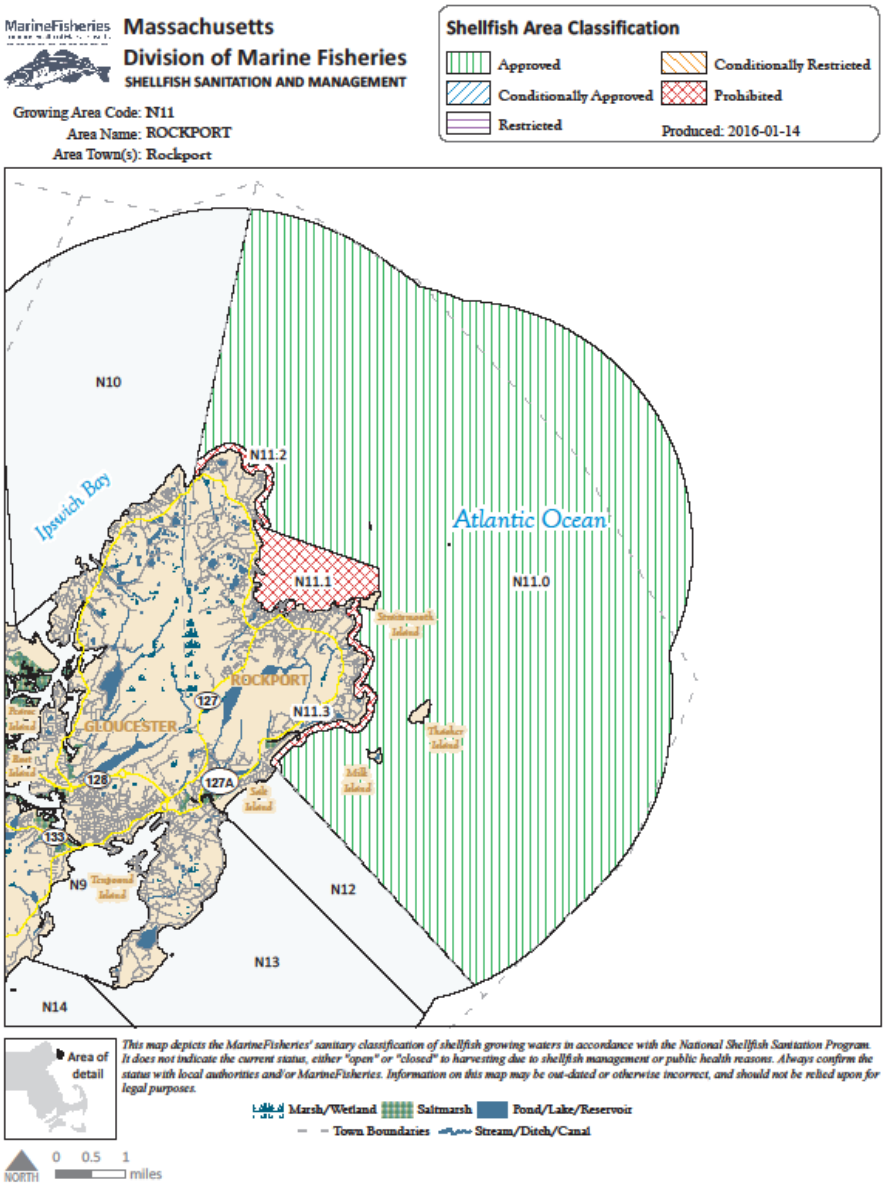
The Rockport WWTP outfall is located approximately 650 feet offshore from Front Beach. This is the closest swimming area to the outfall. There have been three closures of this beach due to high levels of Enterococci bacteria for the period 2003 through 2019 (MassDEP, 2019).

7. Existing or potential recreational and commercial fishing.

The discharge is located approximately 650 feet off the Front Beach in Sandy Bay (Atlantic Ocean). Shellfishing is prohibited landward of a line from the tip of the Rockport Granite Pier to the tip of Gap Head due to the proximity of the Rockport WWTP outfall (See Figure 1). It should be noted that the closure zone is not a reflection

of the effluent quality coming from the outfall. Rather, the closure zone is a requirement under FDA for areas that contain a sanitary outfall.

Figure 1



Paralytic Shellfish Poisoning (PSP) or Red Tide can extend over large stretches of the Maine, New Hampshire, and Massachusetts coasts, not just the Rockport area. PSP is a serios illness caused by eating shellfish contaminated with harmful neurotoxins. These neurotoxins are produced by microscopic algae that can bloom in certain environmental conditions. Massachusetts Division of Marine Fisheries (DMF) collects shellfish from 13 primary stations from March through October and analyzes the samples at their labs to test for toxic levels in shellfish. “PSP is a recurrent and widespread problem in the Gulf

of Maine (GOM)…"[2] PSP outbreaks generally originate is waters further north off the coast of Maine and spread south, so it is not expected that Rockport's discharge causes or contributes to Red Tide outbreaks in the area.

Areas around the discharge can be utilized for recreation fishing for species such as flounder, striped bass, bluefish, cod, and mackerel.

The discharge is not expected to have any negative impact to any recreationally or commercially sought fish or lobsters. This is due to the face that the plant does not discharge any nonconventional pollutants that tend to bioaccumulate and considerable dilution is provided by the ocean water. Additionally, the permit has, and continues to, require Whole Effluent Toxicity testing on *Menidia beryllina*. The permit limit is, and continues to be, 100% effluent. This means that a sample composed of 100% effluent shall cause not greater than 50% mortality to the identified species. As shown in Table 1, the Rockport WWTP has consistently complied with the LC50 limit.

8. Any requirements of an approved Coastal Zone Management Plan (CZMP).

An NPDES permit may not be issued for a discharge to marine or estuarine waters without a review for consistency with the State of Massachusetts Coastal Zone Management Plan. This review has not yet been performed and typically occurs after the permit has been placed on public notice. It is not anticipated that the Rockport WWTP will have any issues complying with the Massachusetts Coastal Zone Management Plan consistency review.

9. Other factors relating to the effects of the discharge as may be appropriate.

Two other effects often associated with treatment plant discharges in New England are enhanced primary productivity and low ambient dissolved oxygen concentrations. Rockport has a small discharge volume and receives considerable dilution when it mixes with the ocean. Consequently, the potential for nuisance algal blooms or episodes of high primary productivity are low. (EPA, 1999)

The potential for episodes of extremely low dissolved oxygen in the area of Rockport's discharge is low for several reasons. The quantity of organic matter discharged in the effluent is low, so the oxygen demand of the effluent will be low. Also, ambient water temperatures are low, which means the solubility of oxygen in this area would be high. These two factors combine to make the occurrence of low dissolved oxygen events unlikely. (EPA, 1999)

10. Marine water quality criteria.

Based on the initial dilution and the anticipated low concentrations of nonconventional pollutants, this discharge is expected to meet all applicable water quality criteria.

[2] https://coastalscience.noaa.gov/data_reports/bloom-dynamics-of-the-red-tide-dinoflagellate-alexandrium-fundyense-in-the-gulf-of-maine-a-synthesis-and-progress-towards-a-forecasting-capability/

The permit contains a condition that the discharge shall not cause a violation of the water quality standards of the receiving water and also that the POTW does not discharge pollutants or combinations of pollutants in toxic amounts.

III. Determination of No Unreasonable Degradation to the Marine Environment

Rockport, MA is a small coastal community with limited industrial inputs into its municipal wastewater. The average monthly design flow of 0.8 mgd is relatively small and receives considerable dilution from Sandy Bay (Atlantic Ocean). It is not anticipated that the discharge will result in the bioaccumulation of nonconventional pollutants. Additionally, the facility has not, and is not expected to in the future, adversely affect any special aquatic sites, endangered species, recreational or commercial fishing, or human health. While the POTW has experienced periodic episodes of non-compliance with NPDES permit limits an administrative order was issued in March of 2004 to address these problems. Based on a review of discharge monitoring reports the facility is now in compliance the vast majority of the time.

Based upon available information, EPA believes that this discharge will not cause unreasonable degradation of the marine environment.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WATER DIVISION
REGION I
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTION 301 AND 402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT.

DATE OF NOTICE: October 11, 2019

PERMIT NUMBER: **MA0100145**

PUBLIC NOTICE NUMBER: MA-001-20

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Rockport
Department of Public Works
34 Broadway
Rockport, MA 01966-1537

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Rockport Wastewater Treatment Plant
Pleasant Street
Rockport, MA 01966

RECEIVING WATER AND CLASSIFICATION:

Sandy Bay (MA93-57): Classification SB

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a draft permit for the Rockport Wastewater Treatment Plant, which discharges treated domestic wastewater. Sludge from this facility is transported to the Agresource, Inc., in Massachusetts for composting. The effluent limits and permit conditions imposed have been drafted to assure that State Water Quality Standards and provisions of the Clean Water Act will be met. EPA has formally requested that the State certify this 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_ma.html or by contacting:

Betsy Davis
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1576
davis.betsy@epa.gov

The administrative record containing all documents relating to this draft permit is on file and 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.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available comments and all supporting material for their comments in full by November 11, 2019, to the EPA contact and address listed above. Any person, prior to such date, may submit a request in writing to EPA and the State Agency 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 this draft permit the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION AND APPEALS:

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. Within 30 days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision.

LEALDON LANGLEY, DIRECTOR	KEN MORAFF, DIRECTOR
DIVISION OF WATERSHED MGMT	WATER DIVISION
MASSACHUSETTS DEPARTMENT OF	UNITED STATES ENVIRONMENTAL
ENVIRONMENTAL PROTECTION	PROTECTION AGENCY – REGION 1