NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMITS FOR AQUACULTURE FACILITIES

MAG130000, NHG130000, AND VTG130000

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NOTE: The aquaculture facility General Permits (AQUAGP) for the Commonwealth of Massachusetts and the States of New Hampshire and Vermont are combined herein. Part 1 contains the General Permit provisions for discharges in the Commonwealth of Massachusetts; Part 2 contains the General Permit provisions for discharges in the State of New Hampshire; Part 3 contains the General Permit provisions for discharges in the State of Vermont; and Parts 4 through 8 are General Permit provisions common to all three General Permits.

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PART 1. MASSACHUSETTS GENERAL PERMIT, PERMIT NO. MAG130000

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), operators of concentrated aquatic animal production (CAAP) facilities and other, similar facilities located in Massachusetts which discharge pollutants to the classes of waters as designated in the Massachusetts Water Quality Standards, 314 CMR 4.00 et seq. are authorized to discharge to all waters, unless otherwise restricted, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This General Permit shall become effective on July 5, 2021 and will expire June 30, 2026.

Signed this 6th day of May, 2021

KENNETH MORAFF Digitally signed by KENNETH MORAFF Date: 2021.05.06 08:49:54 -04'00'

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1.1 Requirements for Discharges from Fish Hatcheries

During the period beginning on the effective date of the written notice of authorization from EPA and lasting through expiration, the Permittee is authorized to discharge pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the Notice of Intent (NOI). Such discharges shall be limited and monitored by the Permittee as specified below. Monitoring is to be conducted and reported in accordance with Part 7, so as to provide the worst-case conditions for affecting the relevant parameter in the effluent.

For the facilities identified in Part 1.2, the effluent limitations and monitoring requirements for whole effluent toxicity (WET) in Part 1.2 shall apply in addition to the effluent limitations and monitoring requirements in this Part.

Effluent Characteristic	**Units**	**Discharge Limitation**		**Monitoring Requirement**[1,2,3]	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Flow[7]	MGD	Report	Report	1/Day	Estimate or Recorder[7]
Total Suspended Solids (TSS)	mg/L	--	10	1/Month[8] or 1/Quarter[9]	Composite
Biochemical Oxygen Demand (BOD_5)	mg/L	--	10	1/Month[8] or 1/Quarter[9]	Composite
pH Range for Class A and Class B waters	Standard Units	--	6.5 to 8.3[10]	1/Week	Grab
pH Range for Class SA and Class SB waters	Standard Units	--	6.5 to 8.5[10]	1/Week	Grab
Total Nitrogen (October – May)[11,12,13]	mg/L, lbs/day	--	Report[13]	1/Quarter[11] or 2/Quarter[13]	Composite
Total Nitrogen (June – September)	mg/L, lbs/day	--	Report[13]	2/Month	Composite
Total Ammonia Nitrogen	mg/L	--	Report	2/Quarter	Composite
Total Phosphorus (October – May)[14]	µg/L, lbs/day	--	Report[15]	1/Quarter	Composite
Total Phosphorus (June – September)	mg/L, lbs/day	--	Report[16]	2/Month	Composite
Formaldehyde[16,17]	mg/L	1.6[18]	4.6[18]	1/Discharge Event	Grab

Effluent Characteristic	**Units**	**Discharge Limitation**		**Monitoring Requirement**[1,2,3]	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Dissolved Oxygen for Class A and B waters - Cold Water Fishery (Formalin Present)[16,19]	mg/L	--	≥6.0	1/Discharge Event	Grab
Dissolved Oxygen for Class A and B waters – Warm Water Fishery (Formalin Present)[16,19]	mg/L	--	≥5.0	1/Discharge Event	Grab
Dissolved Oxygen for Class SA waters (Formalin Present)[16,19]	mg/L	--	≥6.0	1/Discharge Event	Grab
Dissolved Oxygen for Class SB waters (Formalin Present)[16,19]	mg/L	--	≥5.0	1/Discharge Event	Grab
Hydrogen Peroxide[20]	mg/L	--	0.7[18]	1/Discharge Event	Grab
Total Residual Chlorine (in freshwater)[21]	mg/L	0.011[18]	0.019[18]	1/Day	Grab
Total Residual Chlorine (in saltwater)[21]	mg/L	0.0075[18]	0.013[18]	1/Day	Grab
Fish Biomass on Hand	lbs	Report	--	1/Month	Calculate
Fish Feed Used	lbs	Report	--	1/Month	Calculate
Efficiency of Fish Feed Used[22]	%	Report	--	1/Month	Calculate
Upstream Ambient Monitoring[12,23,24]					
Total Nitrogen (June-September)	mg/L	--	Report	2/Month	Grab
Total Phosphorus (June-September)[14]	µg/L	--	Report	2/Month	Grab
Chlorophyll-a (June-September)	mg/L	--	Report	2/Month	Grab
Downstream Ambient Monitoring[12,23.24]					
Total Nitrogen (June-September)	mg/L	--	Report	2/Month	Grab

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirement[1,2,3]	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Total Phosphorus (June-September)[14]	µg/L	--	Report	2/Month	Grab
Chlorophyll-a (June-September)	mg/L	--	Report	2/Month	Grab

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 discharge point to the receiving water after treatment by any settling system, prior to co-mingling with any other waste stream. The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 Code of Federal Regulations (CFR) Part 136.

[2] In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) the method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. MLs 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 calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).

[4] Measurement frequency of 1/day is defined as the recording of one measurement for each 24-hour period. Measurement frequency of 1/week is defined as the recording of one measurement for each week (7-day period). Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month; these events cannot occur on the same day but can occur during the same week as long as both events represent worst-case conditions, as described in Part 7. Measurement frequency of 1/quarter is defined as the sampling of one discharge event in each calendar quarter. Measurement frequency of 2/quarter is defined as the sampling of a discharge event in 2 out of the 3 months of the calendar quarter; a NODI: 9 code can be used for the month not sampled in a given quarter. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

[5] Each composite sample must consist of at least eight grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

[6] Permittees may request to perform grab sampling in lieu of composite sampling, or an alternative composite sampling schedule (e.g., collected over 8 hours), if they can demonstrate to the satisfaction of EPA and the State that the alternative sampling plan will effectively characterize the average daily flow of effluent discharges. To make this demonstration, permittees may provide information on residence times in treatment units (e.g., settling basins) and/or provide monitoring data. EPA will notify the Permittee in writing that an alternative sampling procedure is authorized.

[7] For flow, calculate the average monthly flow by dividing total estimated or recorded gallons discharged each month by number of days of discharge in that month. Flow can be measured or estimated. For those quarters when a discharge does not occur, the Permittee must still submit the DMR with the appropriate no discharge (NODI) code for each parameter. A written explanation for the NODI code is also required with the DMR report.

[8] Permittees with a total annual production greater or equal to 100,000 lbs per year shall conduct monthly monitoring.

[9] Permittees with a total annual production less than 100,000 lbs per year shall conduct quarterly monitoring.

[10] An alternate pH range may be requested in accordance with Part 1.5.a of the Permit.

[11] Total Nitrogen shall be determined by summing total Kjeldahl nitrogen, nitrite-nitrogen, and nitrate-nitrogen concentrations from samples collected concurrently. For example, by performing the "Total Kjeldahl Nitrogen (as N)" test and the "Nitrate-Nitrite (as N)" test and adding the two test results together to produce a value for mg/L of Total Nitrogen.

[12] Permittees shall be subject to an annual nutrient optimization reporting requirement as a supplement to their BMP Plan, provided in Part 5.5 of this General Permit.

[13] Sandwich State Fish Hatchery shall be subject to a rolling annual average Total Nitrogen limit of 14 pounds per day with a monitoring frequency of 2/quarter, consistent with the effluent limitation from the 2015 individual permit (NPDES No. MA0110027). Charles L. McLaughlin State Fish Hatchery shall be subject to a rolling annual average Total Nitrogen limit of 32.4 pounds per day with a monitoring frequency of 2/quarter, consistent with the effluent limitation from the 2014 individual permit (NPDES No. MA0110043). The mass-based average monthly Total Nitrogen effluent limit is an annual average and shall be reported as a rolling average. The value shall be calculated using the current reporting period value for Total Nitrogen in milligrams per liter and the annual average flow calculated using the maximum daily flow from the current reporting period and previous eleven (11) months.

[14] Total Phosphorus analysis must be completed using a test method from 40 C.F.R. Part 136 that achieves an ML of 10 µg/L.

[15] Charles L. McLaughlin State Fish Hatchery shall be subject to an average monthly Total Phosphorus limit of 240 µg/L (0.24 mg/L) with a monitoring frequency of 1/month, consistent with the effluent limitation from the 2014 individual permit (NPDES No. MA0110043).

[16] Monitoring and reporting is only required during formalin use. When formalin is not in use, the Permittee should report a "NODI: 9" code in the applicable DMR.

[17] Formaldehyde shall be tested using EPA Method 1667, Revision A, or 8315A. The ML for formaldehyde is 50 µg/L. Alternate analytical method(s)

shall be approved by EPA at the Permittee's written request as long as the Permittee utilizes method(s) that obtain MLs that are equal to or less than 50 µg/L.

[18] The water quality-based effluent limitation (WQBEL) is shown with zero dilution. The WQBEL must be adjusted using the calculation methodology included in Appendix 6 for sites located in Massachusetts.

[19] Cold water fishery and warm water fishery are defined at Massachusetts Surface Water Quality Standards, 314 CMR 4.02.

[20] Monitoring and reporting is only required during hydrogen peroxide use. When hydrogen peroxide is not in use, the Permittee should report a "NODI: 9" code in the applicable DMR.

[21] Monitoring and reporting is only required during chlorine use or if the discharge is likely to contain residual chlorine (e.g., potable water is in use or chlorine is a chemical used for and/or a byproduct of treatment). The ML for total residual chlorine is defined as 0.02 mg/L. This value is the minimum level for chlorine using EPA approved methods found in Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G, or EPA Manual of Methods of Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 0.02 mg/L, compliance/noncompliance will be determined based on the ML. Sample results of 0.02 mg/L or less shall be reported as "<0.02" on the DMR. When chlorine is not in use and the discharge is unlikely to contain residual chlorine, the Permittee should report a "NODI: 9" code in the applicable DMR.

[22] Efficiency of Fish Feed Used = [Wet Weight of Fish Gained (lbs)/Dry Weight of Feed Applied (lbs)] x 100

[23] Upstream is defined as a location representative of ambient receiving water conditions prior to mixing with effluent from the hatchery. Downstream is defined as a location representative of the receiving water after complete mixing with effluent from the hatchery.

[24] Receiving water samples shall be taken concurrently with effluent samples (i.e., the receiving water grab samples shall be taken during the 24-hour composite period for the effluent). To the extent practicable, receiving water samples shall be collected following a minimum of 72 hours with no precipitation (i.e., dry weather).

1.2 Whole Effluent Toxicity Requirements for Fish Hatcheries

Sandwich Fish Hatchery, Sunderland Fish Hatchery, and Montague Fish Hatchery are subject to WET effluent limitations under this General Permit in accordance with WET limitations established in individual permits previously issued to these facilities. During the period beginning on the effective date of the written notice of authorization from EPA and lasting through expiration, discharges of wastewater containing formalin from these three hatcheries are subject to the following effluent limitations. Such discharges shall be limited and monitored as specified below.

Effluent Characteristic	**Units**	**Discharge Limitation**		**Monitoring Requirement[1,2]**	
		Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Whole Effluent Toxicity[3,4]	%	--	$LC_{50} \geq 100$[5]	1/Discharge Event	Grab
Whole Effluent Toxicity[3,4]	%	--	A-NOEC ≥ 100[6]	1/Discharge Event	Grab

Footnotes

1. Monitoring and reporting is only required during formalin use. When formalin is not in use, the Permittee should report a "NODI: 9" code in the applicable DMR.
2. Monitoring must begin in the first full calendar month of permit coverage.
3. The Permittee shall conduct acute toxicity tests (LC_{50}) in accordance with freshwater or marine test procedures and protocols (as appropriate for receiving water) in Appendices 11 and 12 to this General Permit. For discharges to freshwater, the test species are the daphnid (*Ceriodaphnia dubia*) and the fathead minnow (*Pimephales promelas*). For discharges to salt water, the test species are mysid shrimp (*Americamysis bahia*) and inland silverside (*Menidia beryllina*). The complete report for each toxicity test shall be submitted as an attachment to the DMR submittal for month following the month in which the test occurred.
4. 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 Appendix 11 or 12, Section IV., DILUTION WATER.
5. The LC_{50} is the concentration of wastewater which causes mortality in 50 percent of test organisms.
6. The A-NOEC (acute-no observed effect concentration) is the highest effluent concentration at which there is no statistically-significant adverse effect on the survival of the test organisms when compared with the diluent control survival at the time of observation.

1.3 Other Permit Conditions

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

b. 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.

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

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

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

f. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this General Permit may be revised or amended in accordance with such standards, with the Permittee being so notified.

g. The maximum daily and average monthly concentration of total residual chlorine allowed in the effluent are based on the appropriate water quality criterion and the available dilution in the receiving water. This is expressed in the following equation:

   Effluent Limit = (Dilution Factor) x (Water Quality Criteria)

   Note that the Permittee's provided total residual chlorine effluent limits will be no greater than 1.0 mg/L, regardless of the dilution factor of the receiving water (see section 3.12 of the fact sheet). The appropriate water quality criteria for the calculation are listed in Part 1.1 and 1.3 and shown below:

   - Freshwater acute (Class A or B) = 19 µg/L (0.019 mg/L); use for daily maximum
   - Freshwater chronic (Class A or B) = 11 µg/L (0.011 mg/L); use for average monthly
   - Marine acute (Class SA or SB) = 13 µg/L (0.013 mg/L); use for daily maximum
   - Marine chronic (Class SA or SB) = 7.5 µg/L (0.0075 mg/L); use for average monthly

   The available dilution shall be determined by EPA using the equations found in Appendix 8 of the Permit. Both the dilution factor and applicable chlorine limits will be reviewed by EPA during review of the facility's NOI. The Permittee will be provided with the appropriately determined limits when notified of permit coverage.

h. The Permittee shall notify EPA and the State within 24-hours upon the occurrence of a water quality induced mortality of greater than 25 percent in any aquatic species under culture at the

facility (excluding larval fish and eggs) during a single mortality event.

i. In accordance with 40 CFR § 122.42, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

   i. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
      (4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and applicable State regulations.
   ii. That any activity has occurred or will occur which would result in the discharge, on a nonroutine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) Five hundred micrograms per liter (500 µg/L);
      (2) One milligram per liter (1 mg/L) for antimony;
      (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
      (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and applicable State regulations.
   iii. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

j. This General Permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (d), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

   i. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
   ii. Controls any pollutants not limited in the permit. If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the CWA.

k. The Permittee shall use only those aquaculture drugs and chemicals approved by the U.S. Food and Drug Administration (USFDA) and in accordance with labeling instructions or as allowed in Part 5.1 (Drug Use).

   EPA will defer to the USFDA regarding whether or not a particular drug and/or chemical is used in accordance with appropriate USFDA requirements. Each year as an attachment to the December DMR, the Permittee shall certify in writing that all aquaculture drugs and chemicals

used at the facility during that calendar year were drugs approved by the USFDA and were used in accordance with USFDA labeling or as allowed under Part 5.1.

l. The discharge of any chemical or additive, including chemical substitution, which was not reported in the NOI submitted to EPA and the State or provided through a subsequent written notification submitted to EPA and the State, other than additives used in accordance with Part 5.1, is prohibited. Upon the effective date of this permit, chemicals and/or additives which have been disclosed to EPA and the State or used in accordance with Part 5.1 may be discharged up to the frequency and level disclosed, provided that such discharge does not violate § § 307 or 311 of the CWA or applicable State water quality standards. With the exception of additives used in accordance with Part 5.1, discharges of a new chemical or additive are authorized under this permit 30 days following written notification to EPA and the State unless otherwise notified by EPA and/or the State. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA and the State in accordance with Part 8.1 of this permit. The written notification must include the following information at a minimum:

   i. The following information for each new chemical and/or additive that will be discharged:

      (1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
      (2) Purpose or use of the chemical/additive;
      (3) Safety Data Sheet (SDS), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
      (4) The frequency (e.g. daily, monthly, etc.), magnitude (i.e. maximum application concentration), duration (e.g. hours), and method of application for the chemical/additive;
      (5) The maximum discharge concentration; and
      (6) The vendor's reported aquatic toxicity, if available (i.e. NOAEL and/or LC_{50} in percent for aquatic organism(s)).

   ii. Written rationale which demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) add any pollutants in concentrations which exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

m. There shall be no discharge of untreated wastewaters resulting from cleaning accumulated solids in raceways, culture tanks, screens, and associated equipment absent some form of solids removal. The discharge of water from the hatchery house, or any raceway, pond, canal, circular tanks, etc. to a settling pond, tank, empty raceway, and/or clarifier for the purposes of settling solids, including the temporary storage of those solids, is allowed. The discharges of any decant water that accumulates above those solids and/or any water that flows slowly over those solids is allowed.

n. Any hypochlorite solution applied to the surface of any rearing equipment exposed to culture water must be neutralized prior to that equipment being exposed to culture water.

o. There shall be no discharge of iodine and/or phosphoric acid solution(s) to the receiving water.

p. The Permittee shall notify EPA and the State in writing of any changes in the operations, including the use of chemical additives, at the facility that may have an effect on the permitted discharge of wastewater from the facility.

q. Facilities discharging to tidal waters shall include the Massachusetts Division of Marine Fisheries at FWE-DL-DMFSeniorManagers@mass.gov when reporting to the State in accordance with requirements at Part 1.3.h, 1.3.i, 1.3.l, and 1.3.p, above.

1.4 State Permit Conditions

The Massachusetts state permit conditions require that all Massachusetts Permittees shall comply with the following conditions, which are included as state certification requirements.

a. The pH range of 6.5 to 8.3 standard units (S.U.) for Class A and B waters and 6.5 to 8.5 for Class SA and SB waters must be achieved in the final effluent unless the Permittee can demonstrate to the Massachusetts Department of Environmental Protection (MassDEP) that Massachusetts Surface Water Quality Standards can be attained with an alternate range. Applicants should contact MassDEP by sending a request to massdep.npdes@mass.gov to determine what information and protocol is required to make such a determination. In no case shall the above procedure result in pH limits outside the range of 6.0 – 9.0 S.U. See Part 8.1 below.

b. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal NPDES permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal CWA, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the 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.

c. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal CWA, 40 CFR 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07.

d. Each Agency shall have the independent right to enforce the terms and conditions of this General Permit. Any modification, suspension or revocation of this General Permit shall be effective only with respect to the Agency taking such action and shall not affect the validity or status of this General 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 General 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 an NPDES permit issued by the EPA. In the event this General Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this General Permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

PART 2. NEW HAMPSHIRE GENERAL PERMIT, PERMIT NO. NHG130000

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§ 1251 et seq.; the "CWA"), operators of concentrated aquatic animal production (CAAP) facilities and other, similar facilities located in New Hampshire which discharge pollutants are authorized to discharge to Class B waters, unless otherwise restricted by the New Hampshire water quality standards, 50 RSA §485-A:8 and the New Hampshire Code of Administrative Rules Env-Wq 1700-1709 in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This General Permit shall become effective on July 5, 2021 and will expire June 30, 2026.

Signed this 6th day of May, 2021

KENNETH MORAFF
Digitally signed by KENNETH MORAFF
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Ken Moraff, Director
Water Division
Environmental Protection Agency
Region 1
Boston, MA

2.1 Requirements for Discharges from Fish Hatcheries

During the period beginning on the effective date of the written notice of authorization from EPA and lasting through expiration, the Permittee is authorized to discharge pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the Notice of Intent (NOI). Such discharges shall be limited and monitored by the Permittee as specified below. Monitoring is to be conducted and reported in accordance with Part 7, so as to provide the worst-case conditions for affecting the relevant parameter in the effluent.

Effluent Characteristic	**Units**	**Discharge Limitation**		**Monitoring Requirement[1,2,3]**	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Flow[7]	MGD	Report	Report	1/Day	Estimate or Meter[7]
Total Suspended Solids (TSS) (October-May)	mg/L	--	10	1/Month[8] or 1/Quarter[9]	Composite
Total Suspended Solids (TSS) (June-September)	mg/L	--	10	2/Month[10]	Composite
Biochemical Oxygen Demand (BOD_5)	mg/L	--	10	1/Month[8] or 1/Quarter[9]	Composite
pH Range[11]	Standard Units	--	6.5 to 8.0	1/Week	Grab
Total Nitrogen (October-May)[12,13,14]	mg/L, lbs/day	--	Report	1/Quarter	Composite
Total Nitrogen (June-September)[12,13,14]	mg/L, lbs/day	Report	Report	2/Month	Composite
Total Ammonia Nitrogen	mg/L	--	Report	2/Quarter	Composite
Total Phosphorus (October-May)[14,15]	µg/L, lbs/day	--	Report	1/Quarter	Composite
Total Phosphorus (June-September)[14,15]	µg/L, lbs/day	Report	Report	2/Month	Composite
Dissolved Oxygen (Formalin Absent)[16]	mg/L	--	Report Min.	1/Month	Grab
Dissolved Oxygen Saturation (Formalin Absent)[16]	%	--	Report Min.	1/Month	Grab

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirement[1,2,3]	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Effluent Temperature[16]	ºC	--	Report	1/Month	Grab
Formaldehyde[17,18]	mg/L	1.6[19]	4.6[19]	1/Discharge Event	Grab
Dissolved Oxygen (Formalin Present)[17]	mg/L	--	≥5.0	1/Discharge Event	Grab
Dissolved Oxygen Saturation (Formalin Present)[17]	%	--	≥75	1/Discharge Event	Grab
Hydrogen Peroxide[20]	mg/L	--	0.7[19]	1/Discharge Event	Grab
Total Residual Chlorine (in freshwater)[21]	mg/L	0.011[19]	0.019[19]	Daily[21]	Grab
Total Residual Chlorine (in saltwater)[21]	mg/L	0.0075[19]	0.013[19]	Daily[21]	Grab
Fish Biomass on Hand	lbs	Report	--	1/Month	Calculate
Fish Feed Used	lbs	Report	--	1/Month	Calculate
Efficiency of Fish Feed Used[22]	%	Report	--	1/Month	Calculate
Upstream Receiving Water Monitoring Requirements[13,23]					
Total Nitrogen (June-September)	mg/L	--	Report	2/Month	Grab
Total Phosphorus (June-September)[15]	µg/L	--	Report	2/Month	Grab
Chlorophyll-a (June – September)	mg/L	--	Report	2/Month	Grab
Downstream Receiving Water Monitoring Requirements[13,23]					
Total Nitrogen (June-September)	mg/L	--	Report	2/Month	Grab
Total Phosphorus (June-September)[15]	µg/L	--	Report	2/Month	Grab
Chlorophyll-a (June – September)	mg/L	--	Report	2/Month	Grab

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 discharge point to the receiving water after treatment by any settling system, prior to co-mingling with any other waste stream. The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 Code of Federal Regulations (CFR) Part 136.

[2] In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except whole effluent toxicity, or WET). A method is "sufficiently sensitive" when: 1) the method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. MLs 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 calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).

[4] Measurement frequency of 1/day is defined as the recording of one measurement for each 24-hour period. Measurement frequency of 1/week is defined as the sampling of discharge event in each week (7-day period). Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month; these events cannot occur on the same day but can occur during the same week as long as both events represent worst-case conditions, as described in Part 7. Measurement frequency of 1/quarter is defined as the sampling of one discharge event in each calendar quarter. Measurement frequency of 2/quarter is defined as the sampling of a discharge event in 2 out of the 3 months of the calendar quarter; a NODI: 9 code can be used for the month not sampled in a given quarter. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. For measurement frequency of 1/discharge event, see the applicable footnotes. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

[5] Each composite sample must consist of at least eight grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

[6] Permittees may request to perform grab sampling in lieu of composite sampling, or an alternative composite sampling schedule (e.g., collected over 8 hours), if they can demonstrate to the satisfaction of EPA and the State that the alternative sampling plan will effectively characterize the average daily

flow of effluent discharges. To make this demonstration, Permittees may provide information on residence times in treatment units (e.g., settling basins) and/or provide monitoring data. EPA will notify the Permittee in writing that an alternative sampling procedure is authorized.

[7] For flow, calculate the average monthly flow by dividing total estimated or recorded gallons discharged each month by number of days of discharge in that month. Flow can be measured or estimated. For those quarters when a discharge does not occur, the Permittee must still submit the DMR with the appropriate no discharge (NODI) code for each parameter. A written explanation for the NODI code is also required with the DMR report.

[8] Permittees with a total annual production greater or equal to 100,000 lbs per year shall conduct monthly monitoring.

[9] Permittees with a total annual production less than 100,000 lbs per year shall conduct quarterly monitoring.

[10] All Permittees are subject to twice monthly monitoring for total suspended solids during the growing season months of June through September.

[11] An alternate pH range may be requested in accordance with Part 2.3.a of the Permit.

[12] Total Nitrogen shall be determined by summing total Kjeldahl nitrogen, nitrite-nitrogen, and nitrate-nitrogen concentrations from samples collected concurrently. For example, by performing the "Total Kjeldahl Nitrogen (as N)" test and the "Nitrate-Nitrite (as N)" test and adding the two test results together to produce a value for mg/L of Total Nitrogen.

[13] As part of State Certification, hatcheries discharging in New Hampshire are subject to the monitoring requirements for Total Nitrogen and Total Phosphorus detailed here as well as a nutrient stressor-response monitoring plan described further in Part 2.3 (State Conditions).

[14] Permittees shall be subject to an annual nutrient optimization reporting requirement as a supplement to their BMP Plan, provided in Part 5.5 of this General Permit.

[15] Total Phosphorus analysis must be completed using a test method from 40 C.F.R. Part 136 that achieves an ML of 10 µg/L.

[16] Dissolved oxygen samples shall be collected from a discharge without formalin present. Reporting for dissolved oxygen will be the minimum daily concentration for the month and the percent saturation and effluent temperature that corresponds with the minimum daily value (effluent temperature is required both when formalin is present and not present).

[17] Formaldehyde monitoring and reporting is only required during formalin use. Dissolved oxygen limits apply only when formalin is in use. See FN 17 for requirements when formalin is absent. Reporting for dissolved oxygen will be the minimum daily value for the month. When formalin is not in use, the Permittee should report a "NODI: 9" code in the applicable DMR.

[18] Formaldehyde shall be tested using EPA Method 1667, Revision A, or 8315A. The ML for formaldehyde is 50 µg/L. Alternate analytical method(s) shall be approved by EPA at the Permittee's written request as long as the Permittee utilizes method(s) that obtain MLs that are equal to or less than 50 µg/L.

[19] The water quality-based effluent limitation (WQBEL) is shown with zero dilution. The WQBEL must be adjusted using the calculation methodology included in Appendix 9 for sites located in New Hampshire.

[20] Monitoring and reporting is only required during hydrogen peroxide use. When hydrogen peroxide is not in use, the Permittee should report a "NODI:

9” code in the applicable DMR.

[21] Monitoring and reporting is only required once daily during chlorine use or if the discharge is likely to contain residual chlorine (e.g., potable water is in use or chlorine is a chemical used for and/or a byproduct of treatment). The ML for total residual chlorine is defined as 0.02 mg/L. This value is the minimum level for chlorine using EPA approved methods found in Standard Methods for the Examination of Water and Wastewater Method 4500 CL-E and G, or EPA Manual of Methods of Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 0.02 mg/L, compliance/noncompliance will be determined based on the ML. Sample results of 0.02 mg/L or less shall be reported as “<0.02” on the DMR. When chlorine is not in use and the discharge is unlikely to contain residual chlorine, the Permittee should report a “NODI: 9” code in the applicable DMR.

[22] Efficiency of Fish Feed Used = [Wet Weight of Fish Gained (lbs)/Dry Weight of Feed Applied (lbs)] x 100

[23] Upstream is defined as a location representative of ambient receiving water conditions prior to mixing with effluent from the hatchery. Downstream is defined as a location representative of the receiving water after complete mixing with effluent from the hatchery. Ambient monitoring locations shall be reviewed by NHDES - WMB.

[24] Receiving water samples shall be taken concurrently with effluent samples (i.e., the receiving water grab samples shall be taken during the 24-hour composite period for the effluent). To the extent practicable, receiving water samples shall be collected following a minimum of 72 hours with no precipitation (i.e., dry weather).

2.2 Other Permit Conditions

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

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

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

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

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

f. The maximum daily and average monthly concentration of total residual chlorine allowed in the effluent are based on the appropriate water quality criterion and the available dilution in the receiving water. This is expressed in the following equation:

   Effluent Limit = (Dilution Factor) x (Water Quality Criteria)

   Note that the Permittee's provided total residual chlorine effluent limits will be no greater than 1.0 mg/L, regardless of the dilution factor of the receiving water (see section 3.12 of the fact sheet). The appropriate water quality criteria for the calculation are shown below:

   - Freshwater acute = 19 µg/L (0.019 mg/L); use for daily maximum
   - Freshwater chronic = 11 µg/L (0.011 mg/L); use for average monthly
   - Marine acute = 13 µg/L (0.013 mg/L); use for daily maximum
   - Marine chronic = 7.5 µg/L (0.0075 mg/L); use for average monthly

   The available dilution shall be determined by EPA and NHDES using the equations found in Appendix 9 of the Permit. Both the dilution factor and applicable chlorine limits will be reviewed by EPA and NHDES during review of the facility's NOI. The Permittee will be provided with the appropriately determined limits when notified of permit coverage.

g. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any

water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this General Permit may be revised or amended in accordance with such standards, with the Permittee being so notified.

h. The Permittee shall notify EPA and the State within 24-hours upon the occurrence of a water quality induced mortality of greater than 25 percent in any aquatic species under culture at the facility (excluding larval fish and eggs) during a single mortality event.

i. In accordance with 40 CFR § 122.42, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

   i. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
      (4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and applicable State regulations.
   ii. That any activity has occurred or will occur which would result in the discharge, on a nonroutine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) Five hundred micrograms per liter (500 µg/L);
      (2) One milligram per liter (1 mg/L) for antimony;
      (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
      (4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and applicable State regulations.
   iii. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

j. This General Permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (d), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

   i. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
   ii. Controls any pollutants not limited in the permit. If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the CWA.

k. The Permittee shall inform the EPA and State in writing at least ninety (90) days before any

change in the fish species to be raised or development stage to be attained at this facility, and before any increase in annual fish biomass greater than 20 percent.

l. The Permittee shall use only those aquaculture drugs and chemicals approved by the U.S. Food and Drug Administration (USFDA) in accordance with labeling instructions or as allowed in Part 5.1 (Drug Use). EPA will defer to the USFDA regarding whether or not a particular drug, chemical, or additive is used in accordance with appropriate USFDA requirements. Each year as an attachment to the December DMR, the Permittee shall certify in writing that all aquaculture drugs and chemicals used at the facility during that calendar year were drugs approved by the USFDA and were used in accordance with USFDA labeling or as allowed under Part 5.1.

m. The discharge of any chemical or additive, including chemical substitution, which was not reported in the application submitted to EPA and the State or provided through a subsequent written notification submitted to EPA and the State, other than additives used in accordance with Part 5.1, is prohibited. Upon the effective date of this permit, chemicals and/or additives which have been disclosed to EPA and the State or used in accordance with Part 5.1 may be discharged up to the frequency and level disclosed, provided that such discharge does not violate § § 307 or 311 of the CWA or applicable State water quality standards. With the exception of additives used in accordance with Part 5.1, discharges of a new chemical or additive are authorized under this permit 30 days following written notification to EPA and the State unless otherwise notified by EPA and/or the State. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA and the State in accordance with Part 8.1 of this permit. The written notification must include the following information at a minimum:

   i. The following information for each new chemical and/or additive that will be discharged:

      (1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
      (2) Purpose or use of the chemical/additive;
      (3) Safety Data Sheet (SDS), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
      (4) The frequency (e.g. daily, monthly, etc.), magnitude (i.e. maximum application concentration), duration (e.g. hours), and method of application for the chemical/additive;
      (5) The maximum discharge concentration; and
      (6) The vendor's reported aquatic toxicity, if available (i.e. NOAEL and/or LC_{50} in percent for aquatic organism(s)).

   ii. Written rationale which demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) add any pollutants in concentrations which exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

n. There shall be no discharge of untreated wastewaters resulting from cleaning accumulated solids in raceways, culture tanks, screens, and associated equipment.

o. Any hypochlorite solution applied to the surface of any rearing equipment exposed to culture water must be neutralized prior to that equipment being exposed to culture water.

p. There shall be no discharge of iodine and/or phosphoric acid solution(s) to the receiving water.

q. The Permittee shall notify EPA and the State in writing of any changes in the operations, including the use of chemical additives, at the facility that may have an effect on the permitted discharge of wastewater from the facility.

2.3 State Permit Conditions

The Permittee shall comply with the following conditions which are included as State Certification requirements.

a. The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the ambient upstream pH in the receiving water is outside of this range, and is not altered by the discharge or activities. If the discharge pH is lower than 6.5 S.U., the Permittee may demonstrate compliance by showing that the discharge pH is either higher than, or no more than 0.5 S.U. lower than, the ambient upstream river water pH. For this demonstration, the upstream river water sample must be collected on the same day that the discharge pH is measured. The location where the upstream ambient pH sample is collected must be representative of the upstream conditions unaffected by the Facility's discharge(s) or activities. Results of the ambient upstream river water pH sampling that are obtained to determine compliance with this limit shall be submitted as an attachment to the DMR. The Permittee can also choose to demonstrate to NHDES-WD that NH State Water Quality standards can be attained with an alternative range. Prior to the implementation of any demonstration project, the scope of the demonstration project must receive approval from NHDES-WD. In no case shall the above procedure result in pH limits outside the range of 6.0 – 9.0 S.U.

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

c. This NPDES Discharge Permit is issued by the EPA under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this General Permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13. Each Agency shall have the independent right to enforce the terms and conditions of this General Permit. Any modification, suspension or revocation of this General Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.

d. In addition to the monitoring requirements referenced in section 2.1, footnote 14, within six (6) months of permit authorization, the permittee shall submit an ambient nutrient-stressor response

monitoring plan to NHDES – Watershed Management Bureau for approval. Upon approval of the plan by NHDES, the permittee shall regularly submit reports, in accordance with the schedule provided in the plan, to NHDES – Watershed Management Bureau. Additional information on the monitoring plan is provided in Appendix 13. At a minimum, the ambient stressor-response monitoring plan should include the following:

i. Selection of appropriate response indicators to monitor nutrients in the receiving water. The response indicators shall be attached algae and benthic macroinvertebrates, unless it is determined that attached algae and benthic macroinvertebrates are not suitable response indicators for the site.
ii. Methods and procedures for monitoring selected response indicators, including sampling locations.
iii. Schedule for implementation of monitoring and reporting efforts outlined in the plan. Monitoring and reporting shall occur no less frequently than twice per year for attached algae and once per year for benthic macroinvertebrates.

PART 3. VERMONT GENERAL PERMIT, PERMIT NO. VTG130000

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§ 1251 et seq.; the "CWA"), operators of federally-owned concentrated aquatic animal production (CAAP) facilities and other, similar federal facilities located in Vermont which discharge pollutants are authorized to discharge to all waters, unless otherwise restricted by the Vermont Water Quality Standards in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein.

This General Permit shall become effective on July 5, 2021 and will expire June 30, 2026.

Signed this 6th day of May, 2021

KENNETH MORAFF
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Date: 2021.05.06 09:07:28 -04'00'

Ken Moraff, Director
Water Division
Environmental Protection Agency
Boston, MA 02109-3912

3.1 Requirements for Discharges from Fish Hatcheries

During the period beginning on the effective date of the written notice of authorization from EPA and lasting through expiration, the Permittee is authorized to discharge pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the Notice of Intent (NOI). Such discharges shall be limited and monitored by the Permittee as specified below. Monitoring is to be conducted and reported in accordance with Part 7, so as to provide the worst-case conditions for affecting the relevant parameters in the effluent.

For facilities identified in Part 3.2, the effluent limitations and monitoring requirements for a given parameter in Part 3.2 shall apply in lieu of the effluent limitations and monitoring requirements for the same parameter in this Part.

Effluent Characteristic	**Units**	**Discharge Limitation**		**Monitoring Requirement[1,2,3]**	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Flow[7]	MGD	Report	Report	1/Day	Estimate or Recorder[7]
Total Suspended Solids (TSS)	mg/L	--	10	1/Month[8] or 1/Quarter[9]	Composite
Biochemical Oxygen Demand (BOD_5)	mg/L	--	10	1/Month[8] or 1/Quarter[9]	Composite
pH Range	Standard Units	--	6.5 to 8.5	1/Week	Grab
Total Nitrogen (October – May)[10.11]	mg/L, lbs/day	--	Report	1/Quarter	Composite
Total Nitrogen (June – September)[10,11]	mg/L, lbs/day	--	Report	2/Month	Composite
Total Ammonia Nitrogen[12,13]	mg/L	--	Report	2/Quarter	Composite
Total Phosphorus (October – May)[11,14,15]	µg/L, lbs/day	--	Report	1/Quarter	Composite
Total Phosphorus (June – September)[11,14,15]	mg/L, lbs/day	--	Report	2/Month	Composite
Formaldehyde[16,17]	mg/L	1.6[18]	4.6[18]	1/Discharge Event	Grab
Dissolved Oxygen for Cold Water Fish Habitat (Formalin Present)[16]	mg/L	--	≥7.0[19] ≥6.0[20]	1/Discharge Event	Grab

Effluent Characteristic	**Units**	**Discharge Limitation**		**Monitoring Requirement[1,2,3]**	
		Average Monthly	Maximum Daily	Measurement Frequency[4]	Sample Type[5,6]
Dissolved Oxygen for Warm Water Fish Habitat (Formalin Present)[16]	mg/L	--	≥5.0[20]	1/Discharge Event	Grab
Hydrogen Peroxide[21]	mg/L	--	0.7[18]	1/Discharge Event	Grab
Total Residual Chlorine[22]	mg/L	0.011[18]	0.019[18]	1/Day	Grab
Fish Biomass on Hand	lbs	Report	--	1/Month	Calculate
Fish Feed Used	lbs	Report	--	1/Month	Calculate
Efficiency of Fish Feed Used[23]	%	Report	--	1/Month	Calculate
Upstream Ambient Monitoring[11,24,25]					
Total Nitrogen (June-September)	mg/L	--	Report	2/Month	Grab
Total Phosphorus (June-September)[14]	µg/L	--	Report	2/Month	Grab
Chlorophyll-a (June-September)	mg/L	--	Report	2/Month	Grab
Downstream Ambient Monitoring[11,24,25]					
Total Nitrogen (June-September)	mg/L	--	Report	2/Month	Grab
Total Phosphorus (June-September)[14]	µg/L	--	Report	2/Month	Grab
Chlorophyll-a (June-September)	mg/L	--	Report	2/Month	Grab

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 discharge point to the receiving water after treatment by any settling system, prior to co-mingling with any other waste stream. The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 Code of Federal Regulations (CFR) Part 136.

[2] In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except whole effluent toxicity, or WET). A method is "sufficiently sensitive" when: 1) the method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. MLs 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 calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).

[4] Measurement frequency of 1/day is defined as the recording of one measurement for each 24-hour period. Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month; these events cannot occur on the same day but can occur during the same week as long as both events represent worst-case conditions, as described in Part 7. Measurement frequency of 1/quarter is defined as the sampling of one discharge event in each calendar quarter. Measurement frequency of 2/quarter is defined as the sampling of a discharge event in 2 out of the 3 months of the calendar quarter; a NODI: 9 code can be used for the month not sampled in a given quarter. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.

[5] Each composite sample must consist of at least eight grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

[6] Permittees may request to perform grab sampling in lieu of composite sampling, or an alternative composite sampling schedule (e.g., collected over 8 hours), if they can demonstrate to the satisfaction of EPA and the State that the alternative sampling plan will effectively characterize the average daily flow of effluent discharges. To make this demonstration, Permittees may provide information on residence times in treatment units (e.g., settling basins) and/or provide monitoring data. EPA will notify the Permittee in writing that an alternative sampling procedure is authorized.

[7] For flow, calculate the average monthly flow by dividing total estimated or recorded gallons discharged each month by number of days of discharge in

that month. Flow can be measured or estimated. For those quarters when a discharge does not occur, the Permittee must still submit the DMR with the appropriate no discharge (NODI) code for each parameter. A written explanation for the NODI code is also required with the DMR report.

[8] Permittees with a total annual production greater or equal to 100,000 lbs per year shall conduct monthly monitoring.

[9] Permittees with a total annual production less than 100,000 lbs per year shall conduct quarterly monitoring.

[10] Total Nitrogen shall be determined by summing total Kjeldahl nitrogen, nitrite-nitrogen, and nitrate-nitrogen concentrations from samples collected concurrently. For example, by performing the "Total Kjeldahl Nitrogen (as N)" test and the "Nitrate-Nitrite (as N)" test and adding the two test results together to produce a value for mg/L of Total Nitrogen.

[11] Permittees shall be subject to an annual nutrient optimization reporting requirement as a supplement to their BMP Plan, provided in Part 5.5 of this General Permit.

[12] White River National Fish Hatchery shall be subject to an average monthly Total Ammonia limit of 2.3 mg/L with a monitoring frequency of 2/quarter, consistent with the derivation of the effluent limitation from the 2009 individual permit (NPDES No. VT0020711) updated to the most recent state water quality standards.

[13] Dwight D. Eisenhower National Fish Hatchery shall be subject to an average monthly Total Ammonia limit of 0.7 mg/L and a maximum daily Total Ammonia limit of 3.4 mg/L with a monitoring frequency of 2/quarter, consistent with the derivation of the effluent limitation from the 2009 individual permit (NPDES No. VT0000451) updated to the most recent state water quality standards.

[14] Total Phosphorus analysis must be completed using a test method from 40 C.F.R. Part 136 that achieves an ML of 10 µg/L. All hatcheries except those referenced in Footnote 15 are subject to once per quarter monitoring frequency.

[15] Permittees within the Lake Champlain watershed shall be subject to Total Phosphorus limitations provided in Part 3.2 of this General Permit.

[16] Monitoring and reporting is only required during formalin use. When formalin is not in use, the Permittee should report a "NODI: 9" code in the applicable DMR.

[17] Formaldehyde shall be tested using EPA Method 1667, Revision A, or 8315A. The ML for formaldehyde is 50 µg/L. Alternate analytical method(s) shall be approved by EPA at the Permittee's written request as long as the Permittee utilizes method(s) that obtain MLs that are equal to or less than 50 µg/L.

[18] The water quality-based effluent limitation (WQBEL) is shown with zero dilution. The WQBEL must be adjusted using the calculation methodology included in Appendix 10 for sites located in Vermont.

[19] Applies to all waters that the Secretary of the Agency of Natural Resources determines are salmonid spawning or nursery areas important to the establishment or maintenance of the fishery resource.

[20] Applies to all other waters.

[21] Monitoring and reporting is only required during hydrogen peroxide use. When hydrogen peroxide is not in use, the Permittee should report a "NODI:

9" code in the applicable DMR.

[22] Monitoring and reporting is only required during chlorine use or if the discharge is likely to contain residual chlorine (e.g., potable water is in use or chlorine is a chemical used for and/or a byproduct of treatment). The ML for total residual chlorine is defined as 0.02 mg/L. This value is the minimum level for chlorine using EPA approved methods found in Standard Methods for the Examination of Water and Wastewater, 20th Edition, Method 4500 CL-E and G, or EPA Manual of Methods of Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 0.02 mg/L, compliance/noncompliance will be determined based on the ML. Sample results of 0.02 mg/L or less shall be reported as "<0.02" on the DMR. When chlorine is not in use and the discharge is unlikely to contain residual chlorine, the Permittee should report a "NODI: 9" code in the applicable DMR.

[23] Efficiency of Fish Feed Used = [Wet Weight of Fish Gained (lbs)/Dry Weight of Feed Applied (lbs)] x 100

[24] Receiving water samples shall be taken concurrently with effluent samples (i.e., the receiving water grab samples shall be taken during the 24-hour composite period for the effluent). To the extent practicable, receiving water samples shall be collected following a minimum of 72 hours with no precipitation (i.e., dry weather).

[25] Upstream is defined as a location representative of ambient receiving water conditions prior to mixing with effluent from the hatchery. Downstream is defined as a location representative of the receiving water after complete mixing with the effluent from the hatchery.

3.2 Requirements for Discharges from the Dwight D. Eisenhower National Fish Hatchery

Dwight D. Eisenhower National Fish Hatchery is subject to Total Phosphorus load limits consistent with the 2009 individual permit (NPDES No. VT0000451) and the Lake Champlain TMDL. During the period beginning on the effective date of the written notice of authorization from EPA and lasting through expiration, the Permittee is authorized to discharge nutrients resulting from facility processes, waste streams, and operations that have been clearly identified in the NOI. Such discharges shall be limited and monitored by the Permittee as specified below.

Effluent Characteristic	**Units**	**Discharge Limitations**			**Monitoring Requirements**	
		Average Monthly	Maximum Daily	Annual Total	Measurement Frequency	Sample Type
Dwight D. Eisenhower Total Phosphorus[2]	mg/L	0.8	Report	--	1/Month or 2/Month[2]	Composite[1]
	lbs/day	Report	Report	--	1/Month or 2/Month[2]	Calculate
	lbs/year	--	--	1,523[3]	1/Year	Calculate[2]

Footnotes

1 The composite samples shall consist of at least eight (8) grab samples collected at approximately equal intervals during the day.

2 Monitoring frequency for total phosphorus shall be 1/Month from October through May and 2/Month from June through September.

3 The phosphorus limitation necessary to protect downstream waters is 1,523 pounds per year. The total annual phosphorus load discharged by the facility shall be reported on the January DMR each year by adding the pounds of phosphorus discharged per month for January through December of the previous year. One composite sample shall be taken for phosphorus every 2 weeks (biweekly). The pounds per month shall be determined using the average monthly phosphorus concentration and the total monthly flow. The composite samples for phosphorus shall be taken at appropriate times to approximate the actual average phosphorus concentration over the sampling day (neither overweighting nor underweighting times of cleaning operations or other operational changes).

3.3 Other Permit Conditions

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

b. The effluent shall not contain floating or settleable solids.

c. The discharge shall not cause objectionable discoloration, color, turbidity, foam, or a visible sheen in the receiving waters.

d. The discharge shall not contain materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

e. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this General Permit may be revised or amended in accordance with such standards, with the Permittee being so notified.

f. The maximum daily and average monthly concentration of total residual chlorine allowed in the effluent are based on the appropriate water quality criterion and the available dilution in the receiving water. This is expressed in the following equation:

   Effluent Limit = (Dilution Factor) x (Water Quality Criteria)

   Note that the Permittee's provided total residual chlorine effluent limits will be no greater than 1.0 mg/L, regardless of the dilution factor of the receiving water (see section 3.12 of the fact sheet). The appropriate water quality criteria for the calculation are shown below:

   - Freshwater acute = 19 µg/L (0.019 mg/L); use for daily maximum
   - Freshwater chronic = 11 µg/L (0.011 mg/L); use for average monthly

   The available dilution shall be determined by EPA using the equations found in Appendix 10 of the Permit. Both the dilution factor and applicable chlorine limits will be reviewed by EPA during review of the facility's NOI. The Permittee will be provided with the appropriately determined limits when notified of permit coverage.

g. The Permittee shall notify EPA and the State within 24-hours upon the occurrence of a water quality induced mortality of greater than 25 percent in any aquatic species under culture at the facility (excluding larval fish and eggs) during a single mortality event.

h. In accordance with 40 CFR § 122.42, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

   i. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) One hundred micrograms per liter (100 µg/L);
(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
(4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and applicable State regulations.

ii. That any activity has occurred or will occur which would result in the discharge, on a nonroutine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
(1) Five hundred micrograms per liter (500 µg/L);
(2) One milligram per liter (1 mg/L) for antimony;
(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
(4) Any other notification level established by the Director in accordance with 40 CFR § 122.44(f) and applicable State regulations.

iii. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

i. This General Permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (d), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
ii. Controls any pollutants not limited in the permit. If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the CWA.

j. The Permittee shall inform the EPA and State in writing at least ninety (90) days before any change in the fish species to be raised or development stage to be attained at this facility, and before any increase in annual fish biomass greater than 20 percent.

k. The Permittee shall use only those aquaculture drugs and chemicals approved by the U.S. Food and Drug Administration (USFDA) and in accordance with labeling instructions or as allowed in Part 5.1 (Drug Use).

EPA will defer to the USFDA regarding whether or not a particular drug and/or chemical is used in accordance with appropriate USFDA requirements. Each year as an attachment to the December DMR, the Permittee shall certify in writing that all aquaculture drugs and chemicals used at the facility during that calendar year were drugs approved by the USFDA and were used in accordance with USFDA labeling or as allowed under Part 5.1.

l. The discharge of any chemical or additive, including chemical substitution, which was not

reported in the NOI submitted to EPA and the State or provided through a subsequent written notification submitted to EPA and the State, other than additives used in accordance with Part 5.1, is prohibited. Upon the effective date of this permit, chemicals and/or additives which have been disclosed to EPA and the State or used in accordance with Part 5.1 may be discharged up to the frequency and level disclosed, provided that such discharge does not violate § § 307 or 311 of the CWA or applicable State water quality standards. With the exception of additives used in accordance with Part 5.1, discharges of a new chemical or additive are authorized under this permit 30 days following written notification to EPA and the State unless otherwise notified by EPA and/or the State. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA and the State in accordance with Part 8.1 of this permit. The written notification must include the following information at a minimum:

i. The following information for each new chemical and/or additive that will be discharged:

(1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
(2) Purpose or use of the chemical/additive;
(3) Safety Data Sheet (SDS), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
(4) The frequency (e.g. daily, monthly, etc.), magnitude (i.e. maximum application concentration), duration (e.g. hours), and method of application for the chemical/additive;
(5) The maximum discharge concentration; and
(6) The vendor's reported aquatic toxicity, if available (i.e. NOAEL and/or LC_{50} in percent for aquatic organism(s)).

ii. Written rationale which demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) add any pollutants in concentrations which exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

m. There shall be no discharge of untreated wastewaters resulting from cleaning accumulated solids in raceways, culture tanks, screens, and associated equipment.

n. Any hypochlorite solution applied to the surface of any rearing equipment exposed to culture water must be neutralized prior to that equipment being exposed to culture water.

o. There shall be no discharge of iodine and/or phosphoric acid solution(s) to the receiving water.

p. The Permittee shall notify EPA and the State in writing of any changes in the operations, including the use of chemical additives, at the facility that may have an effect on the permitted discharge of wastewater from the facility.

NOTE: The following Parts 4 through 8 are common elements of the Massachusetts, New Hampshire, and Vermont General Permits.

PART 4. ELIGIBILITY AND COVERAGE UNDER THE AQUAGP

4.1 Eligible Discharges

All land-based CAAP facilities and other, similar facilities that contain, grow, or hold aquatic animals in ponds, raceways, or other similar structures in Massachusetts, New Hampshire, and Vermont (federal facilities only) are eligible for coverage under these permits. A land-based CAAP facility is a hatchery, fish farm, or other facility which contains, grows, or holds aquatic animals in a land-based facility in either of the following categories:

a. Cold water fish species or other cold water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year but does not include:
    i. Facilities which produce less than 9,090 harvest weight kilograms (approximately 20,000 pounds) of aquatic animals per year; and
    ii. Facilities which feed less than 2,272 kilograms (approximately 5,000 pounds) of food during the calendar month of maximum feeding.

b. Warm water fish species or other warm water aquatic animals in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:
    i. Closed ponds which discharge only during periods of excess runoff; or
    ii. Facilities which produce less than 45,454 harvest weight kilograms (approximately 100,000 pounds) of aquatic animals per year.

The Director may elect to provide coverage to a facility not meeting the above criteria upon a determination that the facility is a significant contributor of pollution to waters of the United States. In making such a determination, the Director will consider the following factors:

a. The location and quality of the receiving waters of the United States;

b. The holding, feeding, and production capacities of the facility;

c. The quantity and nature of the pollutants reaching waters of the United States; and

d. Other relevant factors.

4.2 Geographic Coverage Area

a. Massachusetts: Facilities authorized by the Massachusetts General Permit (MAG130000) for discharges in the Commonwealth of Massachusetts are allowed into all waters of the Commonwealth, except as limited in Part 4.3 and/or restricted by the Massachusetts Surface Water Quality Standards at 314 CMR 4.00.

b. New Hampshire: Facilities authorized by the New Hampshire General Permit (NHG130000)

may discharge into Class B waters of the State of New Hampshire, except as provided in Part 4.3, or otherwise restricted by the State Water Quality Standards: New Hampshire 50 RSA 485-A:8 (or as revised) and/or the New Hampshire Code of Administrative Rules, Chapter Env-Wq 1700-1709 (or as revised).

c. Vermont: Federal facilities authorized by the Vermont General Permit (VTG130000) may discharge into Class B waters of the State of Vermont, except as provided in Part 4.3, unless otherwise restricted by the State Water Quality Standards: Vermont Water Quality Standards Environmental Protection Rule Chapter 29(a).

4.3 Limitations on Coverage

The following discharges are excluded from coverage under this General Permit:

a. Discharges to Outstanding Resource Waters (ORWs) in Massachusetts, New Hampshire, and Vermont:

   i. as defined in Massachusetts by 314 CMR 4.06(1)(d)2, including Public Water Supplies (314 CMR 4.06(1)(d)1), unless an authorization is granted by the MassDEP, under 314 CMR 4.04(5).

   ii. as defined in New Hampshire under Env-Wq 1708.04(a), unless allowed by the NHDES under Env-Wq 1708.04(c).

   iii. as designated in Vermont by Secretary of the Agency of Natural Resources under 10 V.S.A. § 1424a.

b. Discharges to Class A waters in New Hampshire, in accordance with RSA 485-A:8, I. To determine if the proposed receiving water is a Class A waterbody, contact the NHDES at the address listed in Appendix 4 of this General Permit.

c. Discharges to Class A waters in Vermont, in accordance with Section 1-04.A.4 of the Vermont Water Quality Standards and 10 V.S.A. §1259. To determine if the proposed receiving water is a Class A waterbody, contact the Vermont DEC at the address listed in Appendix 4 of this General Permit.

d. New or increased discharges to a river designated as a Wild and Scenic River, except in accordance with 16 U.S.C. 1271 et seq. See http://www.rivers.gov/ for more information.

e. New or increased discharges of industrial or commercial waste to Ocean Sanctuaries in Massachusetts in accordance with Massachusetts General Law 132A: The Massachusetts Ocean Sanctuary Act. The boundaries of the five ocean sanctuaries can be found in MGL 132A Section 13: https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXIX/Chapter132A/Section13.

f. Discharges of pollutants identified as the cause of an impairment to receiving water segments identified on the Commonwealth of Massachusetts, the State of New Hampshire, or the State of

Vermont approved 303(d) lists, unless the pollutant concentration is at or below a concentration that meets water quality standards. A discharge is eligible if a segment is impaired for a pollutant that will not be present in the discharge. Permittees must include information in their NOI about impairments to receiving waterbodies. Upon review of the NOI, EPA may require the Permittee to conduct additional effluent sampling to determine if any of the facility discharges are contributing to the receiving waterbody impairment.

Massachusetts 2016 list of impaired waters available at:
https://www.mass.gov/doc/final-massachusetts-year-2016-integrated-list-of-waters/download

New Hampshire 2016 list of impaired waters available at:
https://www.des.nh.gov/organization/divisions/water/wmb/swqa/2016/index.htm

Vermont 2018 list of impaired waters available at:
https://dec.vermont.gov/sites/dec/files/documents/mp_PriorityWatersList_PartA_303d_2018.pdf

g. Any facility whose new or increased discharge is not in compliance with the appropriate state's antidegradation policy or the New Hampshire Water Conservation Rules (Env-Wq 2101, or as amended).

h. Discharges to lakes or ponds in New Hampshire as CAAP facilities are known to contain nutrients whose discharge is prohibited in accordance with Env-Wq 1703.14 (d). In addition, there shall be no new or increased discharges to tributaries of lakes or ponds that would contribute to cultural eutrophication or growth of weeds or algae in such lakes or ponds in accordance with Env-Wq 1703.14 (e).

i. Any facility whose discharge(s) are likely to adversely affect any species listed as threatened or endangered and/or designated critical habitat under the Endangered Species Act (ESA).

j. Discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places under the National Historic Preservation Act of 1966 (NHPA), 16 U.S.C. § 470 et seq. See Appendix 3 of this General Permit for additional NHPA requirements.

k. Discharges to a Publicly Owned Treatment Works (POTW) which are permitted under § 402 of the CWA (NPDES).

l. "New Source" dischargers, as defined in 40 CFR § 122.2. "New Sources" must comply with New Source Performance Standards (NSPS) and are subject to the National Environmental Policy Act (NEPA) Environmental Review Procedures in 40 CFR 6.2. Consequently, EPA has determined that it would be more appropriate to address "New Sources" through the individual permit process.

m. Discharges from net pen aquaculture production. Net pens are defined as floating structures in which nets are suspended into the water column in coastal water and the open ocean.

n. Discharges of any waste streams, including spills and other unintentional or non-routine discharges of pollutants, that are not part of the normal operations of CAAP facilities and other similar facilities as described in the Permittee's NOI, or any pollutants that are not normally present in waste streams.

4.4 Special Eligibility Requirements

Facilities located in Massachusetts, New Hampshire, and Vermont seeking coverage under this General Permit must certify permit eligibility related to endangered species and historic properties.

a. **Endangered Species Act Requirements**: Discharges to areas which include the presence of species listed and/or critical habitat designated under the ESA are not automatically covered under this General Permit. Prior to obtaining coverage under this General Permit, all NOI applicants must certify compliance with one of the criteria found in **Appendix 2** regarding ESA species. The NOI shall include documentation supporting the eligibility determination with regard to federally listed Endangered and Threatened Species and Critical Habitat.

b. **National Historic Preservation Act Requirements**: Discharges which adversely affect properties listed or eligible for listing in the National Registry of Historic Places under the NHPA of 1966, 16 USC §§ 470 et seq. are not authorized under this General Permit. Prior to obtaining coverage under this General Permit, all applicants must certify eligibility regarding historic properties in the NOI based on the criteria in **Appendix 3**. The NOI shall include documentation supporting the eligibility determination with regard to Historic Properties Preservation.

PART 5. NARRATIVE EFFLUENT LIMITATION REQUIREMENTS

5.1 Drug Use

Except as noted below, the Permittee must notify EPA and the applicable State agency in accordance with the following procedures of any investigational new animal drug (INAD) or extra-label drug use which may lead to a discharge of the drug to waters of the United States as stipulated below. However, reporting is not required for any INAD or extra-label drug use that has been previously approved by the USFDA for a different species or disease if the INAD or extra-label use is at or below the approved dosage and involves similar conditions of use.

a. The Permittee must provide to EPA and the applicable State agency a written report of the impending use of an INAD within seven (7) days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.

b. For INAD's and extra-label drug uses, the Permittee must provide an oral report to EPA and the applicable State agency as soon as possible, preferably in advance of use, but no later than seven (7) days after initiating use of that drug. The oral report must identify the drugs used, method of application, and the reason for using that drug.

c. For INAD's and extra-label drug uses, the Permittee must provide a written report to EPA and the applicable State agency within thirty (30) days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application; and the amount added.

5.2 Structural Failure and/or Damage to Culture Units

The Permittee must notify EPA and the applicable State agency in accordance with the following procedures when there is a "reportable failure" in, or damage to, the structure of an aquatic animal containment system (i.e., culture unit) or its wastewater treatment system that results in an unanticipated material discharge of pollutants to waters of the United States.

a. A "reportable failure" applies only to active culture units (ones that contain fish and flowing water) and their ancillary components and refers to the collapse or damage of a rearing unit or its wastewater treatment system; damage to pipes, valves, and other plumbing fixtures; and damage or malfunction to screens or physical barriers in the system, which would prevent the rearing unit from containing water, sediment (i.e., settled solids), and the aquatic animals being reared. Wastewater treatment systems include ponds or settling tanks to which cleaning water is directly discharged and culture units which are used for the temporary storage of settled solids removed from active culture units.

b. The Permittee must provide an oral report to EPA and the applicable State agency within twenty-four (24) hours of discovery of any reportable failure as defined in Part 5.2.a. or damage that results in a material discharge of pollutants. The report shall describe the cause of the failure or damage in the containment system and identify materials that have been released to the environment as a result of that failure.

c. The Permittee must provide a written report to EPA and the applicable State agency within seven (7) days of discovery of the failure or damage documenting the cause, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.

5.3 Spills

In the event a spill of drugs, pesticides or feed occurs that results in a discharge to "waters" or "a water" of the United States, the Permittee must provide an oral report of the spill to EPA and the applicable State agency within twenty-four (24) hours of its occurrence and a written report within seven (7) days to EPA and the applicable State agency. The report shall include the identity and quantity of the material spilled.

5.4 Best Management Practices (BMP) Plan

The Permittee must implement and maintain a BMP Plan on site that describes how the following requirements will be achieved. The Permittee shall make the current version of the BMP Plan available to EPA and/or the applicable State agency upon request. The Permittee shall implement the intent of the BMP Plan following requirements upon the permit's effective date. The Permittee, however, has ninety (90) days following the permit's effective date to certify in writing to EPA and the applicable State agency that a written BMP Plan has been developed in accordance with requirements listed in this part

and must submit that certification with the appropriate DMR.

Further, the Permittee shall amend the BMP Plan within thirty (30) days following any change in facility design, construction, operation, or maintenance which affects the potential for the discharge of pollutants into surface waters or after the EPA and/or the applicable State agency determine certain changes are required following an event that results in non-compliance, exceedance of a benchmark concentration, a facility inspection, or review of the BMP Plan. The Permittee shall place in the BMP Plan a written documentation of each amended change along with a brief description stating the reason for the amendment, including the date of the change or monitoring event that triggered the amendment. The Permittee shall also document what date the amended BMP Plan was implemented.

For all hatcheries, the BMP plan – in addition to its other functions discussed herein – is a document of the facility's efforts to optimize the removal of nutrients in its discharges. The facility's BMPs must specifically target nutrient (total phosphorus and total nitrogen) removal as a goal. Part 5.5., below, provides additional details on implementing this requirement, including annual reporting requirements.

The BMP Plan must address, at a minimum, the following requirements:

a. Solids Control

i. Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the United States.

ii. In order to minimize the discharge of accumulated solids from settling tanks, basins and production systems, identify and implement procedures for routine cleaning of rearing units and settling tanks, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting of aquatic animals in the production system.

iii. If any material is removed from the rearing units and/or settling tanks, describe where it is to be placed and the techniques used to prevent it from entering the surface waters from any on-site storage. If the material is removed from the site, describe who received the material and its method of disposal and/or reuse.

iv. Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the United States, except in cases where EPA and the applicable state agency authorizes such discharges in order to benefit the aquatic environment.

b. Biological Control

i. Describe in detail the precautions that will be exercised by the facility to prevent aquatic organisms that are neither indigenous nor naturalized to State waters from becoming established in the local surface waters.

ii. Provide a description of any storage and/or treatment strategies designed to prevent biological pollution (non-indigenous organisms including fish parasites and fish pathogens and dead or dying fish) from entering the receiving water when the cultured fish population or a portion thereof are showing signs of stress.

c. Materials Storage

i. Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides, or feed to water of the United States.

ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.

d. Structural Maintenance

i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

e. Recordkeeping

i. In order to show how representative feed conversion ratios (i.e., efficiency of fish feed used) were calculated, maintain records documenting the feed amounts and estimates of the number and weight of aquatic animals for each rearing unit.

ii. In order to show how the maximum concentration of formaldehyde in the discharge was derived, maintain records by outfall of the approach/analysis used to determine the elapsed time from its application to its maximum (peak) effluent concentration.

iii. Keep records that document the frequency of cleaning, inspections, repairs and maintenance. In addition, records of all medicinal and chemical usage (i.e., for each occurrence) at the facility shall be recorded and filed in the BMP Plan to include the dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of treatment, and the method of application.

f. Training

i. In order to ensure the proper clean-up and disposal of material, adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.

ii. Train staff on the proper operation and cleaning of production and wastewater

treatment systems including training in feeding procedures and proper use of equipment.

g. Aquaculture Drugs and Chemicals Used for Disease Control and/or Prevention

List in the BMP Plan all aquaculture drugs and chemicals including all INAD and extra-label drugs and for each, identify:

i. Product name and manufacturer.

ii. Chemical formulation.

iii. Purpose/reason for its use.

iv. Dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of application.

v. The method of application.

vi. Safety Data Sheets (SDS), Chemical Abstracts Service Registry number for each active therapeutic ingredient.

vii. The method or methods, if any, used to detoxify the wastewater prior to its discharge.

viii. Information on the persistence and toxicity in the environment.

ix. Information on the USFDA approval for the use of said medication or chemical on fish or fish related products used for human consumption.

x. Available aquatic toxicity data (vendor data, literature data, etc.); Lethal Concentration to 50 percent test organisms (LC_{50}) at 48 and/or 96 hours and No Effect Level (NOEL) concentrations for typical aquatic organisms (salmon, trout, daphnia, fathead minnow, etc.).

5.5 Optimization of Nitrogen and Phosphorus Removal

i. Within one year of the effective date of the permit, the Permittee shall complete an assessment of alternative BMPs or improvements to current BMPs that could be implemented at their facility to optimize the removal of nitrogen and phosphorus in order to minimize annual average mass discharge. The Permittee shall submit a report to EPA and the applicable state agency documenting this evaluation and presenting a description of recommended operational changes (including an implementation timeline) within 15 months of the effective date of the permit. All major BMP categories, in items 5.4.a. through g. above, shall be evaluated, including enhancing cleaning procedures to minimize overflow of solids, use of low phosphorus feed,

using production units at the end of a series exclusively for settling, and optimizing settling area for production volume. However, review of practices beyond those referenced is encouraged. Following the assessment, the permittee shall implement the recommended operational changes.

ii. Following the initial report outlined in Part 5.5.i., the permittee shall submit annual reports to EPA and the applicable state agency, by February 1st of each subsequent year, that summarizes activities related to optimizing nutrient removal, documents the annual nitrogen discharge load and annual phosphorus discharge load from the facility, and tracks trends relative to the previous year. If, in any year, the facilities discharge of total nitrogen or total phosphorus on an average annual basis has increased, the annual report shall include a detailed explanation of the reasons why discharges have increased, including any changes in influent flows/loads and any operational changes. The report shall include all supporting data as well as their revised BMP plan.

iii. The annual nutrient optimization reports and supporting materials shall be kept with the BMP plan, with written documentation of their annual completion included in the plan itself.

EPA's public website, https://www.epa.gov/eg/concentrated-aquatic-animal-production-compliance-guide-and-reporting-forms, hosts templates to provide further guidance on creation and implementation of a BMP Plan for CAAP facilities.

5.6 General Definitions

a. Approved Dosage - the dose of a drug that has been found to be safe and effective under the conditions of a new animal drug application.

b. Aquatic Animal Containment System - a culture or rearing unit such as a raceway, pond, tank, net or other structure used to contain, hold or produce aquatic animals. The containment system includes structures designed to hold sediments and other materials that are part of a wastewater treatment system.

c. Drug -any substance defined as a drug in section 201(g)(2) of the Federal Food, Drug and Cosmetic Act (21 U.S.C. 321).

d. Extra-label Drug Use - a drug approved under the Federal Food, Drug and Cosmetic Act that is not used in accordance with the approved label direction, see 21 CFR Part 530.

e. Investigational New Animal Drug (INAD) - drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 360b(j), to conduct experiments.

f. New Animal Drug Application - defined in 512(b)(1) of the Federal Food, Drug, and Cosmetic Act [21 U.S.C. 360(b)(1)].

g. Pesticide - any substance defined as a "pesticide" in section 2(u) of the Federal Insecticide, Fungicide, and Rodenticide Act [7 U.S.C. 136(u)].

PART 6. OBTAINING AUTHORIZATION TO DISCHARGE

6.1 How to Obtain Authorization to Discharge

To be authorized to discharge by this General Permit, the applicant must submit a complete and accurate NOI to both EPA and the applicable State agency. The NOI must contain all the information required in Appendix 4. Applicable state application fees should be paid in full. The Permittee must confirm that their discharges meet the eligibility requirements of the AQUAGP and that the applicant is requesting coverage under the AQUAGP. However, the facility's discharge will not be authorized under this AQUAGP until the facility receives written authorization to discharge from EPA.

Any facility operating under an effective (unexpired) or an administratively continued individual NPDES permit may request that the individual permit be revoked and that coverage under the AQUAGP be granted. When the facility is granted coverage under the AQUAGP, the facility's individual permit will be terminated and cease to be in effect.

6.2 NOI Submittal

The operator of the facility is responsible for applying for the General Permit as required by 40 CFR §122.21(b). To be authorized by this General Permit, operators of facilities identified in Part 4.1 of this General Permit must submit to EPA and the appropriate State a complete, accurate, and signed NOI. Unless a waiver is obtained following the process described in Appendix 4 Part I.C., the applicant must apply for coverage using EPA's NPDES eReporting Tool (NeT) at http://cdx.epa.gov. NeT will be used for submissions to both EPA and the appropriate State, i.e., a certified NOI submission will go to both agencies.

For facilities in Massachusetts, permittees are additionally required to submit the NOI and fee (if applicable) via the ePlace portal. Instructions are available at https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent.

6.3 NOI Submittal Time Frames

a. Proposed New Discharges: Facilities defined as "New Sources" are not eligible for coverage under this General Permit. This exclusion does not apply to existing discharges that have never been covered under individual NPDES permits; for those, see below.

b. Existing Discharges: Operators of existing discharges, including those facilities with individual NPDES permits that meet the eligibility criteria of this General Permit and that wish to seek authorization under this General Permit, must file an NOI to EPA and the respective State for coverage under this General Permit within 60 days of the effective date of this General Permit. For enforcement purposes, a facility not currently authorized by an NPDES permit that fails to submit an NOI for an existing discharge within 60 days of the effective date of this General

Permit will be considered to be discharging without a permit.

6.4 NOI Requirements

For each eligible discharge, the NOI submitted to EPA for a CAAP facility or other similar facility must include all of the information described in **Appendix 4**, Part I and required in the suggested NOI format, found in **Appendix 4** Part II, including:

1. Permit Eligibility Information;
2. Operator and Facility Information
3. Facility Operations and Production Information;
4. Source Water;
5. Wastewater Discharges;
6. Aquaculture Drugs and Chemicals;
7. Additional Information; and
8. Signature Requirements

6.5 Certification and Signature

The NOI shall contain the following certification statement:

> *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.*

The NOI must be signed by the operator of the facility in accordance with the signatory requirements of 40 CFR § 122.22.

6.6 When the Director May Require an Application for an Individual Permit

The Director may require any operator authorized by this General Permit to apply for and obtain an individual NPDES permit. Any interested operator may petition the Director to take such action. Discharges that the Director determines require an individual NPDES permit are not authorized to discharge under the AQUAGP.

a. Facilities that may require an individual permit based on the Director's consideration of factors including, but not limited to, the following:

    i. The discharge(s) is/are a significant contributor of pollution or is/are in violation of State

Water Quality Standards for the receiving water.

ii. Receiving stream or withdrawal stream characteristics, including possible or known water quality impairment.

iii. The discharge from the facility, when combined with other dischargers in the watershed, may represent a cumulative adverse environmental impact to the receiving water or surface water.

iv. Potential water quality impacts associated with aquaculture facilities.

v. The discharger is not in compliance with the conditions of this General Permit.

vi. In the opinion of the Director, the discharge is more appropriately controlled under an individual or different general permit.

vii. The point source(s) covered by this General Permit no longer:

(1) Involves the same or substantially similar types of operations;
(2) Discharges the same types of wastes;
(3) Requires the same effluent limitations or operating conditions; or
(4) Requires the same or similar monitoring.

b. If the Director requires that an individual permit be issued, the Permittee will be notified in writing that an individual permit is required and will be given an explanation of the reasons for this decision.

c. When an individual NPDES permit is issued to an operator otherwise subject to this General Permit, the operator's coverage under this General Permit will be automatically terminated on the effective date of the individual permit.

6.7 When a Permittee May Request that an Individual Permit Be Issued

Any operator may request to be excluded from the coverage of this General Permit by applying for an individual permit. The request may be made by submitting an individual NPDES permit application and documentation to support the request to EPA for consideration. Application forms and instructions are available at: https://www.epa.gov/npdes-permits/epa-npdes-permit-forms-attachments-new-england.

6.8 EPA Determination of Coverage

Any applicant may request coverage under this General Permit, but the final determination will be made by EPA. Coverage under the General Permit will not be effective until EPA has reviewed the NOI, made a determination that coverage under the AQUAGP is warranted, and has notified the operator in writing of its determination. The effective date of coverage will be specified in EPA's authorization letter.

6.9 NOIs on the EPA Website

All NOIs received by EPA that EPA proposes to authorize will be posted on EPA's website, https://permitsearch.epa.gov/epermit-search/ui/search, for a minimum of thirty (30) days. Following this 30-day period, EPA will either grant authorization, request additional information, or deny authorization under this General Permit and require submission of an application for an individual NPDES permit. A facility will be authorized to discharge under the terms and conditions of this General Permit upon

receipt of the written notice of authorization from EPA. The above website will provide a listing of all facilities authorized to discharge under the terms and conditions of this General Permit.

PART 7. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

The effluent monitoring requirements have been established to yield data representative of the discharge under authority of § 308 (a) of the CWA in accordance with 40 CFR §§ 122.41 (j), 122.44 (l), and 122.48.

7.1 Electronic Reporting

Beginning on the permit's effective date, Permittees in all three states shall electronically submit DMRs to EPA using NetDMR

a. Submittal of Reports Using NetDMR

   NetDMR is accessed from: https://netdmr.epa.gov/. Permittees shall submit DMRs and reports required under this General Permit electronically to EPA using NetDMR.

   Monitoring results shall be summarized for each reporting period and reported electronically using NetDMR no later than the 15th day of the month following the completed reporting period. All reports required under this General Permit shall be submitted to EPA as an electronic attachment to the DMR. Permittees are no longer required to submit hard copies of DMRs to EPA and the appropriate State agency.

b. Submittal of WET Testing Reports

   For Massachusetts facilities required to conduct WET tests, 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

7.2 Timing of Sample Collection

Monitoring for BOD_5, TSS, pH, ammonia, total nitrogen, and total phosphorus shall be conducted during cleaning operations or other operational modes that provide the worst-case for affecting the parameter in the effluent. The Permittee shall collect samples during cleaning operations, as follows:

a. If raceway flows are continuously discharging through a settling pond or are diverted through a settling pond during cleaning, a representative composite sample shall be taken of the settling pond overflow, during cleaning operations.

b. If raceway flows during cleaning operations are diverted to treatment lagoons which are continually discharging, a representative composite sample shall be taken of the lagoon discharge at the time of maximum concentration or design detention time, whichever is best representative of maximum concentration.

c. If lagoons are batch discharged, a representative composite sample shall be taken at the time of discharge.

d. If raceway or tanks are vacuumed, a representative composite sample of discharge shall be taken during the vacuuming cycle.

In order to capture the maximum concentration of formaldehyde, sampling for formaldehyde shall occur as soon as possible after any application of formalin, after accounting for its detention time through the raceways, tanks and piping networks to the outfall. The detention time calculation shall take into account dosage, injection point, facility flow (both velocity and volume), etc. where possible. A sample for dissolved oxygen and WET, if required, shall be collected concurrently with that for formaldehyde.

PART 8. ADMINISTRATIVE REQUIREMENTS

8.1 Notice of Change (NOC)

Facilities covered under this General Permit may request a change to certain conditions through submission of a NOC to EPA and the appropriate State, when required, prepared in accordance with the instructions provided in **Appendix 4** and signed in accordance with 40 CFR §122.22. The Permittee must submit their NOC through EPA's NeT system at https://cdx.epa.gov (see Part 6 above) to request one or more of the following:

a. A change to an alternate pH range.

b. The use of a new or substitute drug(s) and/or chemical(s).

c. A change to certain administrative information, such as a change in facility ownership.

Written approval by EPA is required for all changes to be effective, with the exception of those changes involving administrative information. Prior to receiving written approval for all changes with the exception of those involving administrative information, the Permittee must continue to comply with the associated permit condition.

8.2 Notice of Termination (NOT) of Discharge

Permittees shall notify EPA and the appropriate State agency electronically in EPA's NeT system at https://cdx.epa.gov of the termination of the discharge(s) authorized by this General Permit. The NOT must be completed and submitted through NeT within thirty (30) days of the permanent cessation of the discharge(s) authorized by the AQUAGP.

8.3 Continuation of This General Permit After Its Expiration

If this General Permit is not reissued prior to its expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and in effect for discharges that were authorized prior to expiration. If a facility was granted permit authorization prior to the expiration date of this General Permit, it will automatically remain authorized by this General Permit until the earliest of:

a. Authorization under a reissued general permit following timely and appropriate submittal of a complete and accurate NOI to discharge under the reissued permit;

b. The Permittee's submittal of a NOT;

c. Issuance of an individual permit for the Permittee's discharges; or

d. A formal permit decision by the Director of EPA New England not to reissue this General Permit, at which time the Permittee must seek coverage under an alternative general permit or an individual permit.

However, once this General Permit expires, EPA cannot provide written authorization of coverage under this General Permit to any eligible discharger who submits an NOI to EPA after such expiration date.

If a facility does not submit a timely, appropriate, complete and accurate NOI requesting authorization to discharge under the reissued permit, or a timely request for authorization under an individual or alternative general permit, authorization under this General Permit will terminate on the due date for the NOI under the reissued permit unless otherwise specified in the reissued permit.

APPENDIX 1

SUMMARY OF ESSENTIAL FISH HABITAT DESIGNATIONS

Essential Fish Habitat Designations:

Should an operator detect adverse impacts to essential fish habitat (EFH), EPA must be notified. Consultation with the National Oceanographic and Atmospheric Administration Fisheries (NOAA Fisheries) Habitat Conservation and Ecosystem Services Division and/or an individual permittee may be necessary. Additional information regarding EFH consultations is available on the NOAA Fisheries website at: https://www.fisheries.noaa.gov/national/habitat-conservation/consultations-essential-fish-habitat and from the Greater Atlantic Regional website at: https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/conserving-habitat-greater-atlantic-region A summary of species and life stages with designated EFH in coastal areas in the vicinity of discharges potentially eligible for coverage under the AQUAGP can be found in Section 5.1, Table 1 of the Draft AQUAGP supporting Fact Sheet. An online interactive mapping platform (EFH Mapper) provides a comprehensive list of species and life stages with designated EFH in coastal areas, estuaries, bays, and rivers along the Northeast United States Coast at: https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper.

The current version of the EFH Mapper does not include all species with designated EFH. Most notably for the purposes of the AQUAGP, Atlantic salmon (*Salmo salar*) EFH is not included on the EFH Mapper as of March 25, 2020. EFH for Atlantic salmon includes rivers used for seasonal spawning, including portions of the Connecticut and Merrimack Rivers and their tributaries. The most updated descriptions of designated EFH for Atlantic salmon are found on pages 176-182 and Table 31 of the 2017 Omnibus Essential Fish Habitat Amendment 2: Volume 2 available at https://www.habitat.noaa.gov/application/efhmapper/atlanticSalmonEFH.pdf. EPA has prepared an assessment of the impacts of the proposed discharges to designated EFH for Atlantic salmon and coastal species and has provided a copy of this assessment for review by NOAA Fisheries Habitat Conservation and Ecosystem Services Division. EPA has also made the Draft AQUAGP and supporting Fact Sheet available to NOAA Fisheries.

APPENDIX 2

Endangered Species Act Guidance and Eligibility Criteria

A. Background

In order to meet its obligations under the Clean Water Act and the Endangered Species Act (ESA), and to promote the goals of those Acts, the Environmental Protection Agency (EPA) is seeking to ensure the activities for operators of concentrated aquatic animal production (CAAP) facilities located in Massachusetts, New Hampshire, and two federal facilities in Vermont, regulated by the General Permit (AQUAGP) do not adversely affect endangered and threatened species or designated critical habitat. Facilities applying for permit coverage must assess the impacts of their discharges and discharge-related activities on federally listed endangered and threatened species ("listed species") and designated critical habitat ("critical habitat") to ensure that those goals are met. For the purposes of this appendix, "discharge related activities" include: the discharge of miscellaneous wastewaters associated with the operation of a CAAP facility and the measures taken as part of the facility's Best Management Practices (BMP) plan.

Prior to obtaining general permit coverage, applicants must meet the ESA eligibility provisions of this permit by following the steps in this appendix. EPA strongly encourages applicants to begin this process at the earliest possible stage to ensure the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission. A facility that cannot meet any of the ESA eligibility criteria must apply for an individual permit.

Facilities seeking coverage also have an independent ESA obligation to ensure that their activities do not result in any prohibited "take" of listed species[1]. The term "take" is used in the ESA to mean harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. "Harass" is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

Many of the measures described in the AQUAGP and this appendix to protect species may also assist in ensuring that the applicant's activities do not result in a prohibited take of species in violation of section 9 of the ESA. If the applicant has plans or activities in

[1] Section 9 of the ESA prohibits any person from "taking" a listed species unless: (1) the taking is authorized through an "incidental take statement" as part of completion of formal consultation according to ESA section 7; (2) where an incidental take permit is obtained under ESA section 10 (which requires the development of a habitat conversion plan; or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

an area where endangered and threatened species are located, they may wish to ensure that they are protected from potential take liability under ESA section 9 by obtaining an ESA section 10 permit (Incidental Take Permit) or by requesting formal consultation under ESA section 7. Applicants that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should confer with the appropriate United States Fish and Wildlife Service (USFWS)[2] office or the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), jointly referred to as the Services.

The following are federally listed threatened and endangered species in Massachusetts, New Hampshire, and Vermont:

Massachusetts (16)

Dwarf wedgemussel (*Alasmidonta heterodon*)
Northeastern bulrush (*Scirpus ancistrochaetus*)
Sandplain gerardia (*Agalinis acuta*)
Small whorled pogonia (*Isotria medeoloides*)
Northern long-eared bat *(Myotis septentrionalis)*
Piping plover (*Charadrius melodus*)
Red knot *(Calidris canutus rufa)*
Roseate tern (*Sterna dougallii dougallii*)
Plymouth redbelly turtle (*Pseudemys rubriventis bangsi*)
Bog turtle (*Clemmys muhlenbergii*)
American burying beetle (*Nicrophorus americanus*)
Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*)
Puritan tiger beetle (*Cicindela puritana)*
Rusty patched bumble bee (*Bombus affinis*)
Atlantic sturgeon (*Acipenser oxyrinchus*)*
Shortnose sturgeon (*Acipenser brevirostrum*)*

New Hampshire (12)

Dwarf wedgemussel (*Alasmidonta heterodon*)
Canada lynx *(Lynx Canadensis)*
Northern long-eared bat *(Myotis septentrionalis)*
Piping plover (*Charadrius melodus*)
Red knot *(Calidris canutus rufa)*
Roseate tern (*Sterna dougallii dougallii*)
Karner blue butterfly *(Lycaeides Melissa samuelis)*
Northeastern bulrush (*Scirpus ancistrochaetus*)
Small whorled pogonia (*Isotria medeoloides*)
Jesup's milk-vetch (*Astragalus robbinsii var. jesupii*)
Atlantic sturgeon (*Acipenser oxyrinchus*)*
Shortnose sturgeon (*Acipenser brevirostrum*)*

Vermont

Indiana bat (*Myotis sodalist*)
Northern long-eared bat (*Myotis septentrionalis*)
Canada lynx (*Lynx canadensis*)
Dwarf wedgemussel (*Alasmidonta heterodon*)
Northeastern bulrush (*Scirpus ancistrochaetus*)
Jesup's milk-vetch (*Astragalus robbinsii var. jesupi*)

*These species are listed under the jurisdiction of NOAA Fisheries, all others are listed under the jurisdiction of USFWS.

[2] Discharges to marine waters may require consultation with NOAA Fisheries instead.

In addition, the following are federally protected marine species that are present in the near coastal waters of Massachusetts and New Hampshire. These species are listed under the jurisdiction of NOAA Fisheries:

Marine Reptiles (5)

Loggerhead Sea Turtle *(Caretta caretta)*
Kemp's Ridley Sea Turtle *(Lepidochelys kempii)*
Leatherback Sea Turtle *(Dermochelys coriacea)*
Green Sea Turtle *(Chelonia mydas)*
Hawksbill Sea Turtle *(Eretmochelys imbricata)***

Marine Mammals (2)

North Atlantic Right Whale *(Eubalaena glacialis)*
Fin Whale *(Balaenoptera physalus)*

** Species is rare in near shore Massachusetts and New Hampshire coastal waters.

Finally, NOAA Fisheries has designated critical habitat for Atlantic sturgeon in certain rivers in Massachusetts and New Hampshire and for North Atlantic right whale in coastal areas of Massachusetts and New Hampshire.

Any facility seeking coverage under the Draft AQUAGP must consult with the Services. EPA may designate the applicants as non-Federal representatives for the General Permit for the purpose of carrying out formal or informal consultation with the Services to determine whether a Federal action (*i.e.*, the Draft AQUAGP) is likely to have an adverse impact on listed species and/or critical habitat. *See* 50 CFR §402.08 and §402.13. By terms of this permit, EPA has automatically designated operators as non-Federal representatives for the purpose of conducting formal or informal consultations with the USFWS. See Section B of this appendix. However, as covered in Section C of this appendix, EPA will coordinate with NOAA Fisheries regarding the marine species and anadromous species under its jurisdiction, including Atlantic and shortnose sturgeon and critical habitat for Atlantic sturgeon, to determine that the terms of the permit adequately prevent adverse effects or the take of listed species and prevent adverse effects on critical habitat due to the authorized AQUAGP discharges.

When listed species are present, permit coverage will only be available if EPA determines, or the applicant determines and EPA concurs, that the discharge and related activities will have "no affect" on the listed species or critical habitat, or are "not likely to adversely affect" listed species or critical habitat. If the discharges and related activities are "not likely to adversely affect" listed species or critical habitat, an informal consultation with the Services must be completed and a written concurrence from the Services must be provided with the NOI.

Before submitting a notice of intent (NOI) for coverage under this permit, applicants must determine whether they meet the ESA eligibility criteria by following the steps in Sections B and C of this Appendix. Applicants that cannot meet the eligibility criteria in Sections B and/or C must apply for an individual permit.

B. ESA Eligibility Criteria for the U.S. Fish and Wildlife Service

The USFWS ESA eligibility requirements of this permit relating to the dwarf wedgemussel, northeastern bulrush, Jesup's milk-vetch, sandplain gerardia, small whorled pogonia, Plymouth redbelly turtle, bog turtle, piping plover, roseate tern, red knot, Canada lynx, northern long-eared bat, Indiana bat, puritan tiger beetle, northeastern beach tiger beetle, American burying beetle, Karner blue butterfly, and rusty patched bumble bee may be satisfied by documenting that one of the following criteria has been met:

USFWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities.

USFWS Criterion B: Formal or informal consultation with USFWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation)[3].

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the applicant and affirmed by EPA, that the discharges and related activities will have "no affect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

Steps to Determine if the USFWS ESA Eligibility Criteria Can Be Met

To determine eligibility, you must assess the potential effects of your discharges and related activities on listed species or critical habitat, PRIOR to completing and submitting a Notice of Intent (NOI). You must follow the steps outlined below and document the results of your eligibility determination.

The USFWS Information, Planning, and Conservation (IPaC) online system can be used to develop a preliminary determination of the occurrence of federally listed species or designated critical habitats within the action area of your discharge and related activities. Further information on IPaC is available on the Fish and Wildlife Services' website at http://ecos.fws.gov/ipac/. Instructions for using IPaC are available in an attachment to this Appendix (end of document).

[3] See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance

Step 1 – Determine if you meet USFWS Criterion A:

You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the IPaC online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area.

If you have met USFWS Criterion A skip to Step # 4.

If you have not met USFWS Criterion A, go to Step # 2.

Step 2 – Determine if you meet USFWS Criteria B

You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer "Yes" to **all** of the following questions:

1) Does your action area contain one or more of the following species: dwarf wedgemussel, northeastern bulrush, Jesup's milk-vetch, sandplain gerardia, piping plover, Plymouth redbelly turtle, bog turtle, small whorled pogonia, roseate tern, Canada lynx, puritan tiger beetle, northeastern beach tiger beetle, American burying beetle, Karner blue butterfly, rusty patched bumble bee, red knot, Indiana bat and northern long-eared bat? (IPaC system may be used to answer this question)
2) Did your assessment of the discharge and related activities indicate that they may affect but are "not likely to adversely affect" listed species or critical habitat? [4]
3) Did you contact the USFWS and did formal or informal consultation result in either a "no jeopardy" opinion by the USFWS (for formal consultation) or concurrence by the USFWS that your discharge and related activities would be "not likely to adversely affect" listed species or critical habitat (for informal consultation)?
4) Do you agree to implement all measures upon which the consultation was conditioned?

Use the guidance listed below Step 3 to understand effects determination and to answer these questions.

If you answered "Yes" to all four questions above, you have met eligibility USFWS Criteria B. Skip to Step 4.
If you answered "No" to any of the four questions above, go to Step 3.

[4] See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance.

Step 3 – Determine if you meet USFWS Criterion C

USFWS Criterion C: You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer "Yes" to **either** of the following questions:

1) Does your action area contain one or more of the following species: Canada lynx, sandplain gerardia, small whorled pogonia, Karner blue butterfly, American burying beetle, rusty patched bumble bee, Indiana bat and/or northern long-eared bat and **does not contain any of the following species**: dwarf wedgemussel, northeastern bulrush, Jesup's milk-vetch, piping plover, Plymouth redbelly turtle, bog turtle, roseate tern, puritan tiger beetle, red knot, and northern beach tiger beetle? [5]
2) Did the assessment of your discharge and related activities indicate that there would be "no affect" on listed species or critical habitat [6] ?

Use the guidance below to understand effects determination and to answer these questions.

*If you answered "Yes" to **either** question above, you have met eligibility USFWS Criterion C. Go to Step 4.*
If you answered "No" to both of the questions above, you are not eligible for coverage by this permit. You must submit an application for an individual permit for the discharges from your facility. (See 40 CFR 122.21).

Step 4 - Document results of the Eligibility Determination

Once the USFWS ESA eligibility requirements have been met, you shall include documentation of USFWS ESA eligibility in your NOI. Documentation for the various eligibility criteria are as follows:

- USFWS Criterion A: A copy of the IPaC generated preliminary determination letter indicating that no listed species or critical habitat is present within your action area. You shall also include a statement on how you determined that no listed species or critical habitat are in proximity to your discharges.
- USFWS Criterion B: A dated copy of the USFWS letter of concurrence on a finding of "no jeopardy" (for formal consultation) or "not likely to adversely affect" (for informal consultation) regarding the ESA section 7 consultation.
- USFWS Criterion C: A copy of the IPaC generated preliminary determination letter indicating that the only listed species in your action area are the Canada Lynx, sandplain gerardia, small whorled pogonia, Karner blue butterfly, American burying

[5] EPA has considered the effects of CAAP facility discharges and related activities on the Canada Lynx, Sandplain gerardia, Small whorled Pogonia, Karner Blue Butterfly, American burying beetle, rusty patched bumble bee, Indiana bat and Northern long-eared Bat and determined that discharges in compliance with the AQUAGP will have no effect on these threatened or endangered species.
[6] See USFWS Section 7 consultation handbook, available at http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf for definitions and guidance.

beetle, rusty patched bumble bee, Indiana bat and/or northern long-eared bat; OR a dated copy of the EPA concurrence with the operator's determination that the discharges and related activities will have "no affect" on listed species or critical habitat.

USFWS Effects Determination Guidance:

If you are unable to certify eligibility under USFWS Criterion A, you must assess whether your discharges or related activities "may affect", will have "no affect" or are "not likely to adversely affect" listed species or critical habitat. "Discharge-related activities" include: the discharge of miscellaneous wastewaters associated with the operation of a CAAP facility and the measures taken as part of the facility's Best Management Practices (BMP) plan implementation.
.
The scope of effects to consider will vary with each facility. If you are having difficulty in determining whether your discharge is likely to cause adverse effects to a listed species or critical habitat, you should contact the USFWS for assistance. In order to complete the determination of effects it may be necessary to follow the formal or informal consultation procedures in section 7 of the ESA.

Upon completion of your assessment, document the results of your effects determination. If your results indicate that discharges and related activities will have "no affect" on threatened or endangered species or critical habitat and EPA concurs with your determination, you are eligible under USFWS Criterion C of this Appendix. Your determination may be based on measures that you implement to avoid, eliminate, or minimize adverse effects.

If the determination is "May affect" but "not likely to adversely affect" you must contact the USFWS to discuss your findings and measures you could implement to avoid, eliminate, or minimize adverse effects. If you and the USFWS reach agreement on measures to avoid adverse effects, you are eligible under USFWS Criterion B. Any terms and/or conditions to protect listed species and critical habitat that you relied on in order to complete an adverse effects determination, must be attached to your NOI.

There is the potential for discharges of total suspended solids, pH levels different from ambient levels, total nitrogen, total phosphorus, formaldehyde, hydrogen peroxide and total residual chlorine associated with the wastewaters authorized by this permit. However, these pollutants are limited through AQUAGP conditions and the effluent is designed to be protective of all aquatic and marine species, including protected species. Therefore, there are not expected to be any adverse effects associated with the AQUAGP wastewaters. For those AQUAGP eligible facilities that discharge to an area with Atlantic or shortnose sturgeon present, such facilities have likely already undergone consultation between the EPA and NOAA Fisheries Protected Resources Division in order to obtain an individual NPDES permit in the past.

If endangered species issues cannot be resolved: If you cannot reach agreement with the USFWS on measures to avoid or eliminate adverse effects, you are not eligible for coverage under this permit. You must seek coverage under an individual permit.

C. The ESA Eligibility Criteria for NOAA Fisheries

Listed species under the jurisdiction of NOAA Fisheries are the Atlantic Sturgeon and the Shortnose Sturgeon, as well as two species of whales and five species of sea turtles in the marine environment. NOAA Fisheries has also designated critical habitat for Atlantic sturgeon and North Atlantic right whale in Massachusetts and New Hampshire. For facilities previously covered under individual NPDES permits, EPA has reviewed consultations conducted with NOAA Fisheries Protected Resources Division under ESA section 7. All informal consultations were successfully completed and documented that the terms of the permit adequately prevent adverse effects or the take of listed species and adverse effects on critical habitat due to facility discharges.

Concurrently with this Draft Permit, EPA has provided NOAA Fisheries with EPA's assessment of potential impacts of the Draft Permit on shortnose sturgeon, Atlantic sturgeon, two protected species of whales and five species of sea turtles, as well as designated critical habitat for Atlantic sturgeon and North Atlantic right whale for existing facilities eligible for coverage under the proposed AQUAGP. EPA's assessment of the potential impacts and preliminary finding that the Draft AQUAGP may affect but is not likely to adversely affect listed species or critical habitat will be presented to NOAA Fisheries Protected Resources Division during the public comment period. EPA is seeking concurrence from NOAA Fisheries with its preliminary finding for these previously permitted, existing facilities.

For facilities seeking coverage under the AQUAGP for the first time, EPA will review the information provided in the NOI and work with NOAA Fisheries to determine whether there are likely to be adverse effects on an individual basis. Information that must be included in the NOI related to endangered species under the jurisdiction of NOAA Fisheries:

- Identify if the discharge is located in the:
    - Merrimack River (between Lawrence, MA and the Atlantic Ocean);
    - Connecticut River (between MA/CT state line and Montague, MA);
    - Coastal Areas of Massachusetts or New Hampshire
- Identify if the facility discharges into marine water.
- Identify if there has been any previous formal or informal consultation with NOAA Fisheries, and the result of the consultation.

D. Submittal of Notice of Intent

Once the ESA eligibility requirements of Part B and C of this Appendix have been met, and you have determined NHPA eligibility (see Appendix 3), you may submit the Notice of Intent. Signature and submittal of the NOI constitutes your certification, under penalty of law, of eligibility for permit coverage under 40 C.F.R. § 122.21.

E. Duty to Implement Terms and Conditions upon which Eligibility was Determined

You must comply with any terms and conditions imposed under the ESA eligibility requirements to ensure that your discharges and related activities do not pose adverse effects or jeopardy to listed species and/or critical habitat. If the ESA eligibility requirements of this permit cannot be met, then you may not receive coverage under this permit and must apply for an individual permit.

F. Services Information

United States Fish and Wildlife Service:

National websites for Endangered Species Information:
Endangered Species home page: https://www.fws.gov/endangered/?ref=topbar
Section 7 Consultations:
https://www.fws.gov/endangered/what-we-do/consultations-overview.html
Information, Planning, and Conservation System (IPAC): http://ecos.fws.gov/ipac/

U.S. FWS – Region 5, Supervisor
New England Field Office
U.S. Fish and Wildlife Services
70 Commercial Street, Suite 300
Concord, NH 03301

NOAA Fisheries:

Website: https://www.fisheries.noaa.gov/topic/endangered-species-conservation

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resource Division
Attn: Endangered Species Coordinator
55 Great Republic Drive, Gloucester, MA 01930

Natural Heritage Network

The Natural Heritage Network (NHN) comprises 75 independent heritage program organizations located in all 50 states, 10 Canadian provinces, and 12 countries and

territories located throughout Latin America and the Caribbean. These programs gather, manage, and distribute detailed information about the biological diversity found within their jurisdictions.

In New Hampshire, the Natural Heritage Bureau, within the Division of Forests and Lands, focuses on protection of rare plants and natural communities. The Bureau has locational information on rare plants, wildlife, and natural communities by town and can be accessed at: https://www.nhdfl.org/About-Us/Natural-Heritage-Bureau

New Hampshire Fish and Game Department's Nongame and Endangered Wildlife Program also maintains information on rare wildlife, including Wildlife Action Plans accessible at https://wildlife.state.nh.us/nongame/.

In Massachusetts, the Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program is responsible for conservation and protection of rare species and natural communities. The Program, accessible at https://www.mass.gov/orgs/masswildlifes-natural-heritage-endangered-species-program, maintains information about the presence and distribution of rare species in Massachusetts.

In Vermont, the Vermont Fish & Wildlife Department in the Agency of Natural Resources is responsible for conservation of fish, wildlife and plants and their habitats. More information on this program and on endangered and threatened species in Vermont can be found at, https://vtfishandwildlife.com/conserve/conservation-planning/endangered-and-threatened-species.

U.S. Fish and Wildlife IPaC system instructions
Appendix 2 – Attachment 1

Use the following protocol to determine if any federally listed species or designated critical habitats under USFWS jurisdiction exist in your action area:

Enter your project specific information into the "Initial Project Scoping" feature of the Information, Planning, and Conservation (IPaC) system mapping tool, which can be found at the following location:

http://ecos.fws.gov/ipac/

1. Indicate the action area[7] for the site by either:
    a. Drawing the boundary on the map; or
    b. Uploading a shapefile.

2. Select "continue".

3. Click on the "SEE RESOURCE LIST" button and on the next screen you can export a trust resources list.This will provided a list of natural resources of concern, which will include an Endangered Species Act Species list. You may also request an official species list under "REGULATORY DOCUMENTS". Save copies and retain for your records.

[7] The action area is defined by regulation as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action (50 CFR §402.02). This analysis is not limited to the "footprint" of the action nor is it limited by the Federal agency's authority. Rather, it is a biological determination of the reach of the proposed action on listed species. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area.

The documentation used by a Federal action agency to initiate consultation should contain a description of the action area as defined in the Services' regulations and explained in the Services' consultation handbook. If the Services determine that the action area as defined by the action agency is incorrect, the Services should discuss their rationale with the agency or applicant, as appropriate. Reaching agreement on the description of the action area is desirable but ultimately the Services can only consult when an action area is defined properly under the regulations.

For CAAP facility discharges or discharge related activities, the action area should encompass the following:

- The immediate vicinity of, or nearby, the point of discharge into receiving waters.
- An area downstream from or surrounding the point of discharge in the receiving water reasonably expected to influence the waterbody

The action area will vary with the nature and quantity of the discharges and the type of receiving waters, among other factors.

APPENDIX 3

NATIONAL HISTORIC PRESERVATION ACT SCREENING PROCESS

I. Background

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of Federal "undertakings" on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. 16 USC§ 470 et seq. The term Federal "undertaking" is defined in the NHPA regulations to include a project, activity or program of a Federal agency including those carried out by or on behalf of a Federal agency, those carried out with Federal financial assistance, and those requiring a Federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or object that are included in, or eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(l).

EPA's reissuance of a National Pollutant Discharge Elimination System (NPDES) General Permit is a federal undertaking within the meaning of NHPA regulations. To address any issues relating to historic properties in connection with the issuance of the permit, EPA has included criteria for applicants to certify that potential impacts of their covered activities on historic properties have been appropriately considered and addressed. Although individual applications for coverage under the general permit do not constitute separate Federal undertakings, the screening criteria and certifications provide an appropriate site-specific means of addressing historic property issues in connection with the issuance of the permit. Applicants seeking coverage under the AQUAGP are thus required to make certain certifications regarding the potential effects of their authorized discharges on properties listed or eligible for listing on the National Register of Historic Places.

II. Determination of Potential Impact

Operators seeking coverage under the AQUAGP must determine whether the discharges from their facilities or the implementation of their facility's best management practices (BMP) Plan to control such discharges, may have adverse effects on a property or place that is either listed or eligible for listing on the National Register of Historic Places. The term "adverse effects" includes but is not limited to damage, deterioration, alteration, or destruction of the historic property or place.

For operators with existing discharges from sites which are not undergoing any construction activity, a simple visual inspection may be sufficient to determine whether historic properties are affected and to select one of the criteria in Section III of this Appendix. In fact, EPA has reason to believe that the majority of activities authorized under this general permit will have no potential to affect historic properties because the AQUAGP typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the site. In addition,

many sites covered under the reissuance of this permit will be sites that are seeking renewal of previous permit authorization.

However, for operators with new discharges and existing discharges for which construction activities related to treatment systems or BMPs are planned or ongoing, operators must conduct further inquiry to determine whether historic properties may be affected by the discharge or discharge-related activities. In such instances, operators seeking coverage should first determine whether there are any nearby historic properties or places listed on the National Register or if any nearby properties and places are eligible for listing on the register (e.g., they are "eligible for listing").

Activities With Potential to Affect Historic Properties

Under the ongoing, typical operations of these facilities, EPA does not believe that discharges or discharge-related activities would have the potential to affect historic properties. However, if the permittee undertakes construction or rehabilitation of any of its facilities, intake structures, or associated structures such as dams, which may affect historic properties, it will need to ensure that (1) historic properties will not be affected by their activities and/or (2) it is in compliance with a written agreement with the State Historic Preservation Officers (SHPO), Tribal Historic Preservation Officers (THPO) (if appropriate) or, if the Tribe does not have a THPO, other tribal representative, that outlines all measures the applicant will implement to avoid, minimize or mitigate any adverse effects on historic properties.

EPA suggests that operators seeking coverage under the AQUAGP first search the National Register of Historic Places information available on the National Park Service's website at https://www.nps.gov/subjects/nationalregister/index.htm. Further information can be found in Section IV of this appendix. The relevant State and Tribal Historic Preservation Officers are listed in Sections V and VI of this appendix. Operators seeking coverage may also contact city, county or other local historical societies for assistance, especially when determining if a place or property is eligible for listing on the register.

III. Permit Eligibility Criteria

The following three criteria indicate how facilities seeking coverage under the AQUAGP can meet the special eligibility requirements for protection of historic properties under this general permit. An applicant must meet one or more of the following three criteria (A-C) to be eligible for authorization under the AQUAGP:

Criterion A: No historic properties are present. The discharges and discharge-related activities (e.g., BMP Plans) do not have the potential to affect historic properties.

Criterion B: Historic properties are present. Discharges and discharge-related activities do not have the potential to affect historic properties.

Criterion C: Historic properties are present. The discharges and discharge-related activities have the potential to affect or will have an adverse effect on historic properties. The applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

To determine whether historic properties are present in the vicinity of a facility, an applicant must review all reasonably ascertainable information and, if necessary, conduct a historic survey. Where historic properties are present, an applicant must include documentation of the determination with the NOI submitted to EPA so EPA can confirm that discharges and discharge-related activities do not have the potential to cause effects or will have an adverse effect on historic properties. Where the applicant believes or EPA determines that discharges or discharge-related activities have the potential to cause effects or will have an adverse effect on historic properties, an applicant must contact the relevant SHPO and/or THPO to determine the likelihood that artifacts, records, or remains are potentially present on your site. The NOI must include any terms and conditions that the applicant must follow to mitigate or prevent adverse effects due to the activities regulated by this general permit resulting from evaluation and interaction with a SHPO and/or THPO. These terms and conditions will be included in an applicant's authorization to discharge.

EPA encourages sites seeking coverage to contact the appropriate State or Tribal Historic Preservation Officer as soon as possible in the event of a potential adverse effect to a historic property. In situations where an agreement cannot be reached between an applicant and the State or Tribal Historic Preservation Officer, sites seeking coverage should contact the Advisory Council on Historic Preservation listed in Section VII below for assistance.

Applicants are reminded that they must comply with applicable State, Tribal, and local laws concerning protection of historic properties and should include documentation supporting the determination of permit eligibility in the BMP Plan for their sites.

IV. Information on the National Register of Historic Places

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

The National Park Service is currently in the process of digitizing their records of historic places. Listings of historic places based on the date they were listed can be found on the National Park Service web site at https://www.nps.gov/subjects/nationalregister/database-research.htm#table.

V. State Historic Preservation Officers (SHPO)

Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125
T: (617) 727-8470
TDD: 1-800-392-6090
http://www.sec.state.ma.us/mhc/mhcidx.htm

New Hampshire State Historic Preservation Office
New Hampshire Division of Historical Resources Attention: Review and Compliance
19 Pillsbury Street
Concord, NH 03301-3570
T: (603) 271-8850
TDD: 1-800-735-2964
http://www.nh.gov/nhdhr/programs/national_register.html

Vermont State Historic Preservation Office
Vermont Division for Historic Preservation
One National Life Drive
Deane C. Davis Building, 6th Floor
Montpelier, VT 05620-0501
Phone: 802-828-3222
Email: laura.trieschmann@vermont.gov

SHPO information can also be found online at
https://www.nps.gov/subjects/nationalregister/shpo-inventories.htm

VI. Tribal Historic Preservation Officers (THPO)

Wampanoag Tribe of Gay Head-Aquinnah
Bettina Washington, THPO
20 Black Brook Road
Aquinnah, MA 02535-9701
T: 508.645.9265 x 175
F: 508.645.3790
Email: bettina@wampanoagtribe.net
http://www.wampanoagtribe.net

THPO information can also be found online at http://nathpo.org/wp/thpos/find-a-thpo/

VII. Advisory Council on Historic Preservation

The Advisory Council on Historic Preservation (ACHP) is an independent federal agency that promotes the preservation, enhancement, and productive use of our Nation's historic resources and advises the President and Congress on national historic preservation policy. The National

Historic Preservation Act (NHPA) established ACHP in 1966 with the goal of having federal agencies act as responsible stewards of our Nation's resources when their actions affect historic properties. ACHP is the only entity with the legal responsibility to encourage federal agencies to factor historic preservation into federal project requirements. As directed by NHPA, ACHP serves as the primary federal policy advisor to the President and Congress; recommends administrative and legislative improvements for protecting our Nation's heritage; advocates for the full consideration of historic values in federal decision making; and reviews federal programs and policies to promote effectiveness, coordination, and consistency with national preservation policies.

Main Office:
Advisory Council on Historic Preservation
Old Post Office Building
1100 Pennsylvania Avenue, NW, Suite 809
Washington, DC 20004
Phone: (202) 606-8503
E-mail: achp@achp.gov
http://www.achp.gov/

APPENDIX 4
ELECTRONIC REPORTING - NOTICE OF INTENT (NOI), NOTICE OF CHANGE (NOC), AND NOTICE OF TERMINATION (NOT) FORMAT AND INSTRUCTIONS

I. Notice of Intent (NOI) Instructions

Unless a waiver is obtained following the process described in Part I.C. of this appendix, the applicant must apply for coverage using EPA's NPDES eReporting Tool (NeT) at https://cdx.epa.gov.[1] Upon issuance of the Final AQUAGP, EPA will offer training to eligible operators on submitting NOIs through NeT. Operators not contacted by EPA but seeking coverage for their Facility's discharge under the AQUAGP should reach out to EPA through one of the contact's on this webpage, https://www.epa.gov/npdes-permits/region-1-final-aquaculture-general-permit. This appendix contains a summary of information required by the eNOI system.

A. Required Information

1. Permit Eligibility Information

   a. Indicate the State (MA, NH, or VT) where the Facility is located.
   b. Provide answers to questions about permit eligibility based on Part 4 of the AQUAGP (e.g., whether the facility is a new source, is a net pen, etc.).
   c. Provide information about the current permit status of the facility, including if prior individual NPDES permit coverage has been granted and the permit number, if a pending NPDES application is on file for the discharge(s) and the date of submittal.

2. Operator and Facility Information

   a. Provide the name, address, and location (latitude and longitude) of the facility, contact information for the facility owner, and contact information for the facility operator (if different from the owner). The latitude and longitude should be provided in decimal degrees and the World Geodetic System 1984 (WGS84) standard coordinate system. This coordinate system is specified in the NPDES Electronic Reporting rule (40 Code of Federal Regulations (CFR) part 127). For further guidance, refer to http://www.epa.gov/geospatial/latitudelongitude-data-standard.

3. Facility Operations and Production Information

   a. Provide the 4-digit standard industrial classification (SIC) code(s). For Fish Hatchery or Preserve, SIC code 0921. For Animal Aquaculture, SIC code 0273. You can find SIC code numbers and descriptions in the 1987 Standard Industrial

[1] This collection of information is approved by OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. (OMB Control No. 2040-0004).

Classification Manual at http://www.osha.gov/pls/imis/sic_manual.html.

b. Provide production information broken down by months that the Facility contains, grows, or holds aquatic animals. Indicate the maximum monthly pounds of food given at your facility.

c. Provide information on the discharge structures, waste management units, and production system.

d. List the species of fish or aquatic animals held and fed at your facility. Distinguish between cold-water and warm-water species. The names of fish species should be proper, common, or scientific names as given in *Special Publication 34 of the American Fisheries Society, Common and Scientific Names of Fishes from the United States, Canada, and Mexico*. For each species, provide the total harvestable weight in pounds (lbs.) for a typical calendar year. Also indicate the maximum weight present at any one time at your facility.

e. Provide (attach) a process flow diagram showing water flow through all facility operations that contribute to the discharge.

4. Source Water

a. Name of each source water that contributes flow to the facility.

b. Provide the quantity of flow from each source water: minimum, average, and maximum flow.

c. Describe any source water treatment that occurs.

d. Indicate when the source water is used: annually, seasonally, monthly, etc.

5. Wastewater Discharges

a. Information about discharges from each outfall and each type of effluent, including the location of the outfall (latitude and longitude), the type of discharge, maximum and average flows and pH (including whether alternative pH limitations are requested and, if so, if State's approval is attached). See Item 1.b for requirements for providing the latitude and longitude.

b. In addition, for each outfall, provide the flow limitations from the previous permit and the state-approved dilution factor. See Appendices 6 (MA), 7 (NH), or 8 (VT).

c. Provide the name and type of the receiving water, receiving waterbody classification, if the waterbody is included on the State's Integrated List of Waters and information about any impairments.

6. Aquaculture Drugs and Chemicals

Provide information on all projected aquaculture drugs and chemicals, including whether any drugs that are Investigational New Animal Drugs (INADs).

7. Additional Information

a. Acknowledge the development of a Best Management Practices (BMP) Plan. Provide a certification for species and habitat under the jurisdiction of U.S. Fish

and Wildlife Service (USFWS) AND National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries). The Facility must certify and provide documentation if there are no USFWS species present. The facility must indicate if the facility is not located in the areas where listed species under the jurisdiction of NOAA Fisheries exist. The certification requirements for the AQUAGP under the ESA, including necessary documentation, are explained in detail in Appendix 2.

b. Facilities must attach supporting documentation for eligibility where historic properties are present and may be impacted by the authorized discharges. The criteria for eligibility for the AQUAGP under the NHPA are explained in detail in Appendix 3.

c. Provide any supplemental information, including antidegradation review information applicable to new or increased discharges.

8. Signature Requirements

The NOI must be signed and dated in accordance with the signatory requirements of 40 CFR §122.22. The signatory must also certify the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

B. Submission of NOI to the Appropriate State Agency

1. All documents submitted through NeT will be forwarded to the appropriate State Agency. Unless stated otherwise in this section, no other State-specific action is required once an NOI is submitted in NeT.

2. New Hampshire Nutrient Stressor-Response Monitoring. All documents required under Appendix 13 *New Hampshire Nutrient Stressor-Response Monitoring Plan Guidance* should be submitted as outlined in that appendix.

C. Waiver from Electronic Reporting

A waiver from electronic reporting may be requested by contacting EPA at the address below to obtain an "Electronic Reporting Waiver Request" application:

U.S. Environmental Protection Agency
Water Division

Attn: Water Permits Branch
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109-3912

II. Notice of Change (NOC) Instructions

Permittee's covered under the AQUAGP may request a change to certain conditions of their authorization to discharge through the NeT system. Unless otherwise noted, a requested change does not become effective until an operator receives electronic approval from EPA. The signatory requirements are the same as described in the NOI instructions above, Part I.A.8.

III. Notice of Termination (NOT) Instructions

Operators of facilities and/or operations authorized under the AQUAGP shall notify EPA and the appropriate State agency of the termination of discharge(s) through the NeT system. The signatory requirements are the same as described in the NOI instructions above, Part I.A.8.

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

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

A. GENERAL REQUIREMENTS

1. Duty to Comply

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

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

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

(1) Criminal Penalties

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

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

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

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

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

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

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

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

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

2. <u>Permit Actions</u>

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. <u>Upset</u>

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

APPENDIX 6
DILUTION FACTOR AND EFFLUENT LIMITATION CALCULATIONS FOR MASSACUSETTS

Prior to completing the Notice of Intent (NOI) requirements for the AQUAGP, the applicant must contact the State to confirm the critical low flow (7Q10) of the receiving water, dilution factor (DF), other appropriate hydrologic conditions, and to confirm site-specific limiting factors, including additional water quality-based effluent limitations (WQBELs). See Part I.C.2 of Appendix 4 (Suggested NOI Format and Instructions) for contact information.

I. Dilution Factor

A DF for sites that discharge to freshwater receiving waters in Massachusetts is calculated using the equation below. Alternate calculation methods for DFs may be acceptable if approved by the State. A DF for sites that discharge to saltwater receiving waters in Massachusetts is assumed to be 1:1, unless otherwise approved on a case-by-case basis by the State.

A. Determine 7Q10:

1. Using SWToolbox: SWToolbox is a desktop application that builds upon past tools, such as SWSTAT and DFLOW, which have historically been used to estimate low flow statistics from stream gage data. SWToolbox allows users to compute n-day frequency analyses (i.e., 1Q10 or 7Q10) and biologically based flows. It also facilitates the use of USGS National Water Information System (NWIS) streamflow data, as well as user-provided data files. The SWToolbox desktop application can be downloaded at: https://water.usgs.gov/osw/swtoolbox/.

2. Using StreamStats: StreamStats is a web application that provides access to an assortment of geographic information system (GIS) analytical tools that are useful for water resources planning and management, as well as engineering and design purposes. StreamStats can be used for mapping and exploring the drainage area and stream gages near a discharge location of interest. StreamStats is available at: https://www.usgs.gov/mission-areas/water-resources/science/streamstats-streamflow-statistics-and-spatial-analysis-tools.

B. Calculate Dilution Factor:

1. The equation used to calculate the dilution factor is:

$$Dilution\ Factor = \frac{Q_S + Q_D}{Q_D}$$

Where:

Q_S = 7Q10 in million gallons per day (MGD)
Q_D = Discharge flow in MGD

II. Effluent Limitation Calculations

Applicants applying to discharge to receiving waters in Massachusetts shall utilize the calculation instructions provided below to calculate effluent limitations for formaldehyde, total residual chlorine, and hydrogen peroxide, as specified in Part 1.1 of the AQUAGP.

A. Calculate WQBELs:

If no dilution applies, skip this step. In this case, the acute water quality criterion for copper calculated in Part II.A, above, shall be applied as the WQBEL and the WQBELs specified in Part 1.1 of the AQUAGP for formaldehyde and hydrogen peroxide shall be applied directly, without credit for dilution.

Note that if a WQBEL is calculated to be lower than the criterion, then the WQBEL is set at the criterion. Calculate the WQBEL as follows:

1. Calculate the freshwater WQBEL for a parameter detected in the receiving water or for saltwater receiving waters for which MassDEP has approved a dilution factor on a case-by-case basis as:

$$C_d = \frac{Q_r C_r - Q_s C_s}{Q_d}$$

Where:

C_d = Discharge concentration (i.e., WQBEL) in µg/L
Q_r = Downstream receiving water flow in MGD[1]
C_r = Downstream concentration (i.e., water quality criterion) in µg/L[2]
Q_s = Upstream flow (i.e., 7Q10) in MGD
C_s = Upstream concentration in µg/L[3]
Q_d = Discharge flow in MGD[4]

2. Calculate the WQBEL for a parameter either not detected in the receiving water or for which receiving water sampling is not required as:

$$C_d = \left(\frac{Q_r}{Q_d}\right) \times C_r$$

[1] Equal to the sum of the upstream 7Q10 and the discharge flow. If available, a downstream 7Q10 may be used.
[2] Use the water quality criterion as calculated in Part II.A of this appendix for copper or the water quality criteria listed in Part 1.1 of the AQUAGP for formaldehyde and hydrogen peroxide.
[3] If the sample size is greater than 1, the median value may be used.
[4] Equal to the effluent flow limitation.

APPENDIX 7
DILUTION FACTOR AND EFFLUENT LIMITATION CALCULATIONS FOR NEW HAMPSHIRE

Prior to completing the Notice of Intent (NOI) requirements for the AQUAGP, the applicant must contact the State to confirm the critical low flow (7Q10) of the receiving water, dilution factor (DF), other appropriate hydrologic conditions, and to confirm site-specific limiting factors, including additional water quality-based effluent limitations (WQBELs). See Part I.C.2 of Appendix 4 (Suggested NOI Format and Instructions) for contact information.

I. Dilution Factor

A DF for sites that discharge to freshwater receiving waters in New Hampshire is calculated using a 10% reserve of the receiving water's assimilative capacity according to Env-Wq 1705.01 (or as revised) as specified below. Alternate calculation methods for DFs may be acceptable if approved by the State. A DF for sites that discharge to saltwater receiving waters in New Hampshire is assumed to be 1:1, unless otherwise approved on a case-by-case basis by the State.

A. Determine 7Q10:

Facility's discharging in New Hampshire must use the Dingman method to calculate 7Q10 values[1]. The applicant may contact New Hampshire Department of Environmental Services (NHDES) for this calculation or provide their own calculations for review. Resources to assist in calculations of the 7Q10 flow include:

1. SWToolbox: SWToolbox is a desktop application that builds upon past tools, such as SWSTAT and DFLOW, which have historically been used to estimate low flow statistics from stream gage data. SWToolbox allows users to compute n-day frequency analyses (i.e., 1Q10 or 7Q10) and biologically based flows. It also facilitates the use of USGS National Water Information System (NWIS) streamflow data, as well as user-provided data files. The SWToolbox desktop application can be downloaded at: https://water.usgs.gov/osw/swtoolbox/.

2. StreamStats: StreamStats is a web application that provides access to an assortment of geographic information system (GIS) analytical tools that are useful for water resources planning and management, as well as engineering and design purposes. StreamStats can be used for mapping and exploring the drainage area and stream gages near a discharge location of interest. StreamStats is available at: https://www.usgs.gov/mission-areas/water-resources/science/streamstats-streamflow-statistics-and-spatial-analysis-tools.

B. Calculate Dilution Factor:

1. The equation used to calculate the dilution factor is:

[1] Dingman, S.L., and Lawlor, S.C. 1995. *Estimating Low-Flow Quantiles from Drainage-Basin Characteristics in New Hampshire and Vermont*. American Water Resources Association, Water Resources Bulletin: pp 243-256.

$$Dilution\ Factor = \frac{Q_R + Q_P}{Q_P} \times 0.9$$

Where:

Q_R = 7Q10 in million gallons per day (MGD)
Q_P = Discharge flow in MGD
0.9 = Factor to reserve 10 percent of the receiving water's assimilative capacity

When the 7Q10 value (Q_R) is determined to be a downstream value based on the Dingman method, the discharge flow (Q_p) should not be added in the numerator.

II. Effluent Limitation Calculations

Applicants applying to discharge to receiving waters in New Hampshire shall utilize the calculation instructions provided below to calculate effluent limitations for formaldehyde, total residual chlorine, and hydrogen peroxide, as specified in Part 2.1 of the AQUAGP. WQBELs are calculated using a 10% reserve of the receiving water's assimilative capacity according to ENV-Wq 1705.01 (or as revised) as specified below.

A. Calculate WQBELs:

If no dilution applies, the WQBELs specified in Part 2.1 of the AQUAGP for formaldehyde and hydrogen peroxide shall be applied directly, without credit for dilution. Therefore, if no dilution applies, skip this step.

Note that if the discharge concentration (C_d below) is calculated to be lower than the criterion multiplied by 0.9, then the WQBEL is set at the criterion. Calculate the WQBEL as follows:

1. Calculate the freshwater WQBEL for a parameter detected in the receiving water or for saltwater receiving waters for which NHDES has approved a dilution factor on a case-by-case basis as:

$$C_d = \frac{Q_r(C_r \times 0.9) - Q_s C_s}{Q_d}$$

Where:

C_d = Discharge concentration (i.e., WQBEL) in µg/L
Q_r = Downstream receiving water flow in MGD[2]
C_r = Downstream concentration (i.e., water quality criterion) in µg/L[3]
0.9 = Factor to reserve 10 percent of the receiving water's assimilative capacity
Q_s = Upstream flow (i.e., 7Q10) in MGD
C_s = Upstream concentration in µg/L[4]

[2] Equal to the sum of the upstream 7Q10 and the discharge flow. If available, a downstream 7Q10 may be used.
[3] Use the water quality criterion as calculated in Part II.A of this appendix for copper or the water quality criterion listed in Part 2.1 of the AQUAGP for formaldehyde and hydrogen peroxide.
[4] If the sample size is greater than 1, the median value may be used.

Q_d = Discharge flow in MGD[5]

When the 7Q10 value (Q_s) is determined to be a downstream value based on the Dingman method, Q_s is adjusted by subtracting the discharge flow (Q_d) from the calculated 7Q10 value.

2. Calculate the WQBEL for a parameter either not detected in the receiving water, or for which receiving water sampling is not required as:

$$C_d = \frac{C_r Q_r}{Q_d} \times 0.9$$

[5] Equal to the effluent flow limitation.

APPENDIX 8
DILUTION FACTOR AND EFFLUENT LIMITATION CALCULATIONS FOR VERMONT

Prior to completing the Notice of Intent (NOI) requirements for the AQUAGP, the applicant must contact the State to confirm the critical low flow (7Q10) of the receiving water, dilution factor (DF), other appropriate hydrologic conditions, and to confirm site-specific limiting factors, including additional water quality-based effluent limitations (WQBELs). See Part I.C.2 of Appendix 4 (Suggested NOI Format and Instructions) for contact information.

I. Dilution Factor

A DF for sites that discharge to receiving waters in Vermont is calculated using the equation below. Alternate calculation methods for DFs may be acceptable if approved by the State.

A. Determine 7Q10:

1. Using SWToolbox: SWToolbox is a desktop application that builds upon past tools, such as SWSTAT and DFLOW, which have historically been used to estimate low flow statistics from stream gage data. SWToolbox allows users to compute n-day frequency analyses (i.e., 1Q10 or 7Q10) and biologically based flows. It also facilitates the use of USGS National Water Information System (NWIS) streamflow data, as well as user-provided data files. The SWToolbox desktop application can be downloaded at: https://water.usgs.gov/osw/swtoolbox/.

2. Using StreamStats: StreamStats is a web application that provides access to an assortment of geographic information system (GIS) analytical tools that are useful for water resources planning and management, as well as engineering and design purposes. StreamStats can be used for mapping and exploring the drainage area and stream gages near a discharge location of interest. StreamStats is available at: https://www.usgs.gov/mission-areas/water-resources/science/streamstats-streamflow-statistics-and-spatial-analysis-tools.

B. Calculate Dilution Factor:

1. The equation used to calculate the dilution factor is:

$$Dilution\ Factor = \frac{Q_S + Q_D}{Q_D}$$

Where:

Q_S = 7Q10 in million gallons per day (MGD)
Q_D = Discharge flow in MGD

II. Effluent Limitation Calculations

Applicants applying to discharge to receiving waters in Vermont shall utilize the calculation instructions provided below to calculate effluent limitations for formaldehyde, total residual chlorine, and hydrogen peroxide, as specified in Part 3.1 of the AQUAGP.

A. Calculate WQBEL:

If no dilution applies, skip this step. In this case, the WQBELs specified in Part 3.1 of the AQUAGP shall be applied directly, without credit for dilution, for formaldehyde and hydrogen peroxide.

Note that if a WQBEL is calculated to be lower than the criterion, then the WQBEL is set at the criterion. Calculate the WQBEL as follows:

1. Calculate the WQBEL for a parameter detected in the receiving water as:

$$C_d = \frac{Q_r C_r - Q_s C_s}{Q_d}$$

Where:

C_d = Discharge concentration (i.e., WQBEL) in µg/L
Q_r = Downstream receiving water flow in MGD[1]
C_r = Downstream concentration (i.e., water quality criterion) in µg/L[2]
Q_s = Upstream flow (i.e., 7Q10) in MGD
C_s = Upstream concentration in µg/L[3]
Q_d = Discharge flow in MGD[4]

2. Calculate the WQBEL for a parameter either not detected in the receiving water, or for which receiving water sampling is not required as:

$$C_d = \left(\frac{Q_r}{Q_d}\right) \times C_r$$

[1] Equal to the sum of the upstream 7Q10 and the discharge flow. If available, a downstream 7Q10 may be used.
[2] Use the water quality criterion listed in Part 3.1 of the AQUAGP for formaldehyde and hydrogen peroxide.
[3] If the sample size is greater than 1, the median value may be used.
[4] Equal to the effluent flow limitation.

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° 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 (^oC)	$20^oC \pm 1^oC$ or $25^oC \pm 1^oC$, temperature must not deviate by more than 3^oC 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.

FRESHWATER CHRONIC
TOXICITY TEST PROCEDURE AND PROTOCOL
USEPA Region 1

I. GENERAL REQUIREMENTS

The permittee shall be responsible for the conduct of acceptable chronic toxicity tests using three fresh samples collected during each test period. The following tests shall be performed as prescribed in Part 1 of the NPDES discharge permit in accordance with the appropriate test protocols described below. (Note: the permittee and testing laboratory should review the applicable permit to determine whether testing of one or both species is required).

- **Daphnid (Ceriodaphnia dubia) Survival and Reproduction Test.**
- **Fathead Minnow (Pimephales promelas) Larval Growth and Survival Test.**

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

II. METHODS

Methods to follow are those recommended by EPA in: Short Term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition. October 2002. United States Environmental Protection Agency. Office of Water, Washington, D.C., EPA 821-R-02-013. The methods are available on-line at http://www.epa.gov/waterscience/WET/ . Exceptions and clarification are stated herein.

III. SAMPLE COLLECTION AND USE

A total of three fresh samples of effluent and receiving water are required for initiation and subsequent renewals of a freshwater, chronic, toxicity test. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. Fresh samples are recommended for use on test days 1, 3, and 5. However, provided a total of three samples are used for testing over the test period, an alternate sampling schedule is acceptable. 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 hold time extension. All test samples collected may be used for 24, 48 and 72 hour renewals after initial use. All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6° C.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol.

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 (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 prior to sample use for toxicity testing.

If any of the renewal samples are of sufficient potency to cause lethality to 50 percent or more of the test organisms in any of the test treatments for either species or, if the test fails to meet its permit limits, then chemical analysis for total metals (originally required for the initial sample only in Section VI) will be required on the renewal sample(s) as well.

IV. DILUTION WATER

Samples of receiving water must be collected from a location in the receiving water body immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. 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 an 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 diluent is found to be, or suspected to be toxic or unreliable an 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 is the case where repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use be made by the permittee and toxicity testing laboratory. The second is in the case where two of the most recent documented incidents of unacceptable site dilution water toxicity requires 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

Method specific test conditions and TAC are to be followed and adhered to as specified in the method guidance document, EPA 821-R-02-013. 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.1. Use of Reference Toxicity Testing

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

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.

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.1.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 IC25 values and ≥ two concentration intervals for NOECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

V.2. For the *C. dubia* test, the determination of TAC and formal statistical analyses must be performed using only the first three broods produced.

V.3. Test treatments must include 5 effluent concentrations and a dilution water control. An additional test treatment, at the permitted effluent concentration (% effluent), is required if it is not included in the dilution series.

VI. CHEMICAL ANALYSIS

As part of each toxicity test's daily renewal procedure, pH, specific conductance, dissolved oxygen (DO) and temperature must be measured at the beginning and end of each 24-hour period in each test treatment and the control(s).

The additional analysis that must be performed under this protocol is as specified and noted in the table below.

Parameter	Effluent	Receiving Water	ML (mg/l)
Hardness[1, 4]	x	x	0.5
Total Residual Chlorine (TRC)[2, 3, 4]	x		0.02
Alkalinity[4]	x	x	2.0
pH[4]	x	x	--
Specific Conductance[4]	x	x	--
Total Solids [6]	x		--
Total Dissolved Solids [6]	x		--
Ammonia[4]	x	x	0.1
Total Organic Carbon [6]	x	x	0.5
Total Metals [5]			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

1. Hardness may be determined by:

- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
  -Method 2340B (hardness by calculation)
  -Method 2340C (titration)

2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.

- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
  -Method 4500-CL E Low Level Amperometric Titration
  -Method 4500-CL G DPD Colorimetric Method
- USEPA 1983. Manual of Methods Analysis of Water and Wastes
  -Method 330.5

3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing
4. Analysis is to be performed on samples and/or receiving water, as designated in the table above, from all three sampling events.
5. Analysis is to be performed on the initial sample(s) only unless the situation arises as stated in Section III, paragraph 4
6. Analysis to be performed on initial samples only

VII. TOXICITY TEST DATA ANALYSIS AND REVIEW

A. Test Review

1. Concentration / Response Relationship

A concentration/response relationship evaluation is required for test endpoint determinations from both Hypothesis Testing and Point Estimate techniques. The test report is to include documentation of this evaluation in support of the endpoint values reported. The dose-response review must be performed as required in Section 10.2.6 of EPA-821-R-02-013. Guidance for this review can be found at http://water.epa.gov/scitech/methods/cwa/ . In most cases, the review will result in one of the following three conclusions: (1) Results are reliable and reportable; (2) Results are anomalous and require explanation; or (3) Results are inconclusive and a retest with fresh samples is required.

2. Test Variability (Test Sensitivity)

This review step is separate from the determination of whether a test meets or does not meet TAC. Within test variability is to be examined for the purpose of evaluating test sensitivity. This evaluation is to be performed for the sub-lethal hypothesis testing endpoints reproduction and growth as required by the permit. The test report is to include documentation of this evaluation to support that the endpoint values reported resulted from a toxicity test of adequate sensitivity. This evaluation must be performed as required in Section 10.2.8 of EPA-821-R-02-013.

To determine the adequacy of test sensitivity, USEPA requires the calculation of test percent minimum significant difference (PMSD) values. In cases where NOEC determinations are made based on a non-parametric technique, calculation of a test PMSD value, for the sole purpose of assessing test sensitivity, shall be calculated using a comparable parametric statistical analysis technique. The calculated test PMSD is then compared to the upper and lower PMSD bounds shown for freshwater tests in Section 10.2.8.3, p. 52, Table 6 of EPA-821-R-02-013. The comparison will yield one of the following determinations.

- The test PMSD exceeds the PMSD upper bound test variability criterion in Table 6, the test results are considered highly variable and the test may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC). If the test results indicate that the discharge is not toxic at the PLC, then the test is considered insufficiently sensitive and must be repeated within 30 days of the initial test completion using fresh samples. If the test results indicate that the discharge is toxic at the PLC, the test is considered acceptable and does not have to be repeated.

- The test PMSD falls below the PMSD lower bound test variability criterion in Table 6, the test is determined to be very sensitive. In order to determine which treatment(s) are statistically significant and which are not, for the purpose of reporting a NOEC, the relative percent difference (RPD) between the control and each treatment must be calculated and compared to the lower PMSD boundary. See *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program*, EPA 833-R-00-003, June 2002, Section 6.4.2. The following link: Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program can be used to locate the USEPA website containing this document. If the RPD for a treatment falls below the PMSD lower bound, the difference is considered statistically insignificant. If the RPD for a treatment is greater that the PMSD lower bound, then the treatment is considered statistically significant.

- The test PMSD falls within the PMSD upper and lower bounds in Table 6, the sub-lethal test endpoint values shall be reported as is.

B. Statistical Analysis

1. General - Recommended Statistical Analysis Method

Refer to general data analysis flowchart, EPA 821-R-02-013, page 43

For discussion on Hypothesis Testing, refer to EPA 821-R-02-013, Section 9.6

For discussion on Point Estimation Techniques, refer to EPA 821-R-02-013, Section 9.7

2. *Pimephales promelas*

Refer to survival hypothesis testing analysis flowchart, EPA 821-R-02-013, page 79

Refer to survival point estimate techniques flowchart, EPA 821-R-02-013, page 80

Refer to growth data statistical analysis flowchart, EPA 821-R-02-013, page 92

3. *Ceriodaphnia dubia*

Refer to survival data testing flowchart, EPA 821-R-02-013, page 168

Refer to reproduction data testing flowchart, EPA 821-R-02-013, page 173

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Test summary sheets (2007 DMR Attachment F) 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
    - Test sensitivity evaluation results (test PMSD for growth and reproduction)
    - Permit limit and toxicity test results
    - Summary of test sensitivity and concentration response evaluation

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 limits (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
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint

Appendix 11
New Hampshire Fish Hatchery Nutrient Stressor-Response Monitoring

The permittee shall conduct ambient monitoring to determine potential responses by the biological community to nutrient stressors from the fish hatchery. Response indicators to be monitored should be attached algae and benthic macroinvertebrates, unless it is determined that attached algae and benthic macroinvertebrates are not suitable response indicators for the site. For attached algae monitoring, NHDES is recommending photographic documentation and visual quantitation of in-situ abundance. In general, macroinvertebrate sampling consists of the deployment of three replicate artificial substrate devices (e.g. rock baskets) for a period of 6-weeks at each sample location.

Prior to sampling, an ambient nutrient stressor-response monitoring plan (Plan) shall be submitted to NHDES – Watershed Management Bureau for approval and shall include methods and procedures for monitoring selected response indicators including sampling locations, a schedule for implementation of monitoring and reporting efforts outlined in the Plan, and sampling and laboratory analysis protocols and quality control provisions.

Monitoring and reporting shall occur no less frequently than twice per year for attached algae and once per year for benthic macroinvertebrates. Monitoring shall be conducted in the summer season following six months after the effective date of the permit. See table below for specific monitoring requirements.

Unless otherwise allowed by NHDES, the Plan shall include the following:

Parameter	Frequency, Timing of Data Collection, and Sample Locations
Attached algae	• Monitoring shall occur annually between May-October • Sampling shall occur on two separate dates, at least four weeks apart • Monitoring shall be done at one upstream sample location and one downstream sample location • In-situ algal surveys shall be conducted after a period of 7 to 10 days without rain (defined as <1/4" in last 24 hours and <1" in last 7-10 days)
Benthic Macroinvertebrates	• Artificial substrate devices shall be deployed between July 15th to 31st, and collected between September 15th to 30th • Monitoring shall be done at one downstream sample location • Three replicate artificial substrate devices shall be deployed for six weeks at each sample location

The attached algae sampling plan shall be similar to that for the Maine Department of Environmental Protection:
https://www.maine.gov/dep/water/monitoring/biomonitoring/materials/sop_algae_methods.pdf

Benthic macroinvertebrate sampling shall be done in accordance with NHDES protocols:
https://www.des.nh.gov/organization/divisions/water/wmb/biomonitoring/documents/20131118-macroinverts-col-sop.pdf

For each sampling station, the following shall be provided:

- Site map with longitudinal and latitudinal coordinates
- Site description including weather, vegetation, flow conditions, and any other site conditions that would potentially impact water quality
- Photographs of the monitoring location on each day of sampling

The Plan shall also specify that all data shall be submitted to NHDES electronically and in a form that can be automatically uploaded into the NHDES Environmental Monitoring Database (EMD). Information on uploading data to the EMD can be found at
http://des.nh.gov/organization/divisions/water/wmb/emd/index.htm or by contacting Melanie Titus at (603) 271-1152 or Melanie.Titus@des.nh.gov.

APPENDIX 12
Site Specific Effluent Limitations

Limitations on Flow

NPDES ID	Hatchery (Outfall)	Flow (MGD)	
		Average Monthly	Max Daily
MA0110043	Charles L. McLaughlin State Fish Hatchery (001)[1]	7.5	8.1
MA0005398	North Attleboro National Fish Hatchery (001)[1]	1.7	1.7
MA0110051	Montague State Fish Hatchery (001)[2]	1.9	2.4
MA0110035	Sunderland State Fish Hatchery (001)[2]	3.4	3.6
MA0110027	Sandwich State Fish Hatchery (001)[2]	1.6	1.8
NH0110001	Milford State Fish Hatchery (001)[2]	2.7	3.2
NH0000752	New Hampton State Fish Hatchery (001)[2]	1.6	1.8
	New Hampton State Fish Hatchery (002)[2]	0.5	0.6
	New Hampton State Fish Hatchery (004)[2]	2.9	3.3
NH0000744	Twin Mountain State Fish Hatchery (001)[2]	1.2	1.4
NH0000736	Warren State Fish Hatchery (001)[1]	2.3	2.6
NH0023515	Nashua National Fish Hatchery (001)[3]	2.2	2.2
VT0000451	Dwight D. Eisenhower National Fish Hatchery (001)[1]	2.6	3.0
VT0020711	White River National Fish Hatchery (001)[1]	6.62	7.05

[1] Flow limits carried forward from the individual permit.
[2] New flow limits implemented in the general permit. These limits were derived from the monthly average flow data from the period of January 1, 2015 to November 30, 2020. The monthly average flow limit was calculated as three standard deviations greater than the long-term average from the 2015-2020 period. This assumes a normal distribution of flow and accounts for over 99% of all recorded values, thus largely requiring the hatchery to maintain current operations for controlling flow. Where daily maximum data was available, daily maximum flow limits were calculated similarly; where unavailable, daily maximum flow limits were set 15% higher than the monthly average limit. EPA found a 15% increase between the limits was similar to pre-existing hatchery limits.
[3] The daily maximum flow limit was carried forward from the hatcheries individual permit. The hatchery did not have a monthly average flow limit but has discharged no more than the daily maximum limit on average each month. Therefore, the monthly average limit was set equal to the daily maximum limit.

Limitations on Other Parameters

Hatchery (Individual Permit NPDES ID)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand, 5-day (BOD_5)	Total Nitrogen (TN)	Total Ammonia Nitrogen	Total Phosphorus (TP)	Whole Effluent Toxicity (WET)
Charles McLaughlin SFH (MA0110043)	584 lbs/day Maximum Daily	584 lbs/day Maximum Daily	32.4 lbs/day Rolling Annual Average Optimization		0.24 mg/L Average Monthly	
Montague SFH (MA0110051)	116 lbs/day Maximum Daily	116 lbs/day Maximum Daily	Optimization			LC50 ≥ 100 A-NOEC ≥ 100
Sunderland SFH (MA0110035)	97 lbs/day Maximum Daily	97 lbs/day Maximum Daily	Optimization			LC50 ≥ 100 A-NOEC ≥ 100
North Attleboro NFH (MA0005398)	5 mg/L Average Monthly	5 mg/L Average Monthly				
Twin Mountain SFH (NH0000744)			Optimization			
Dwight D. Eisenhower NFH (VT0000451)				0.7 mg/L Average Monthly 3.4 mg/L Maximum Daily	0.8 mg/L Average Monthly 1,523 lbs/year Annual Total	
White River NFH (VT0020711)			Optimization	2.3 mg/L Average Monthly		