

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 species¹. 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 rubriventris 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 sodalists*)
 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.nhdfi.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/conservation/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 area⁷ 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 provide 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

SUGGESTED NOTICE OF INTENT (NOI) FORMAT AND INSTRUCTIONS

I. Notice of Intent (NOI) Instructions

A. Required Information

Applicants seeking coverage under the AQUAGP must submit a written NOI to EPA and the appropriate State agency as described below. The NOI consists of either the suggested NOI format included in Section II of this document or another format of official correspondence that contains all of the required information described below and listed in the suggested format.

At a minimum, the NOI must include the information in Parts I.A.1 through I.A.7 below for each facility. Additional information may be attached as needed.

1. General Facility Information

- a. Indicate whether applying for MA, NH, or VT AQUAGP.
- b. 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>.
- c. List the 4-digit standard industrial classification (SIC) code(s) and North American Industrial Classification System (NAICS) code(s) that best describe your facility. You can find SIC code numbers and descriptions in the 1987 Standard Industrial Classification Manual at http://www.osha.gov/pls/imis/sic_manual.html. You can find NAICS code numbers and descriptions in the North American Industrial Classification System Manual at <http://www.census.gov/eos/www/naics/>. Use the latest edition of the manuals.
- d. 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, and a topographic map indicating the locations of the facility and outfalls.

2. Discharge Information

- a. 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.
- b. A schematic of water flow through the facility.
- c. 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.

3. Operations and Production Information

- a. Provide information on the discharge structures, waste management units, and production system.
- b. 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.
- c. Indicate the maximum monthly pounds of food given at your facility. Also indicate the month given. The amounts should be representative of your normal operations.

4. Aquaculture Drugs and Chemicals

Provide information on all projected aquaculture drugs and chemicals, including whether any drugs that are Investigational New Animal Drugs (INADs). If you do not have enough space in the table, you may continue on additional sheets, as necessary, using a format consistent with the table.

5. Water Source

Provide information on the water source(s) that contribute flow to the facility. If you do not have enough space in the table, you may continue on additional sheets, as necessary, using a format consistent with the table.

6. Endangered Species Act (ESA) Certification

The certification requirements for the AQUAGP under the ESA, including necessary documentation, are explained in detail in Appendix 2. Facilities must include 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.

7. National Historic Properties Act (NHPA) Eligibility

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

8. Supplemental Information

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

B. Signature Requirements

The NOI must be signed and dated in accordance with the signatory requirements of 40 CFR §122.22, including the certification statement shown on the suggested NOI format.

C. Submission of NOI to EPA and the Appropriate State Agency

1. NOI submittal timelines

- a. Proposed new dischargers that are seeking coverage under this General Permit must submit an NOI to EPA and the respective State, at least thirty (30) days prior to the commencement of discharge.
- b. Existing facilities seeking coverage under this General Permit must file an NOI to EPA and the respective State within sixty (60) days of the effective date of this permit reissuance.

Filing with EPA - All operators located in Massachusetts, New Hampshire, and Vermont that apply for coverage under this General Permit must submit a NOI to EPA-New England. All NOIs submitted after December 21, 2020 must be submitted electronically. Prior to December 21, 2020, NOIs and any attachments may be submitted to EPA either electronically at Aquaculture.GeneralPermit@epa.gov or at the address provided below. After December 21, 2020, where an operator is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes submittal in electronic format, submit NOIs in hard copy form to:

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP Aquaculture General Permit Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109-3912

2. Filing with the States - A copy of the NOI filed with EPA-New England must also be filed with state agencies as described below. The state agency may elect to develop a

state specific form or other additional information requirements. All applicants should keep a copy of the complete application package for their records.

- a. Discharges in Massachusetts: Applicants for discharges to an outstanding resource water (ORW) must submit a copy of their completed NOI and the completed State Transmittal Form to:

Massachusetts Department of Environmental Protection
Surface Water Discharge (NPDES) Permitting Program
1 Winter Street, 5th floor, Boston, MA 02108

The transmittal form, instructions, and fee amount may be obtained through the MassDEP website at <http://www.mass.gov/eea/agencies/massdep/water/wastewater/surface-water-discharge-permitting-npdes.html>. Click on NPDES General Permits for instructions and a link to the transmittal form.

In addition, a check for the appropriate fee and a copy of the transmittal form must be sent to:

Massachusetts Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

Applicants for discharges to all other waters do not require any submission to MassDEP.

- b. Discharges in New Hampshire: All applicants must provide a completed copy of their NOI to:

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

- c. Discharges in Vermont: All applicants must provide a completed copy of their NOI to:

Vermont Department of Environmental Conservation
Watershed Management Division
1 National Life Drive, Main Building, 2nd Floor
Montpelier, VT 05620-3522

II. Suggested Format for the AQUAGP Notice of Intent (NOI):

Request for General Permit Authorization to Discharge Wastewater Notice of Intent (NOI) to be covered by the Aquaculture General Permit (AQUAGP) No. MAGXXXXXX, NHGXXXXXX, or VTGXXXXXX

Indicate Applicable General Permit for Discharge(s): ☐ MAGXXXXXX ☐ NHGXXXXXX ☐ VTGXXXXXX

A. Facility Information

1. Facility Location	Name:		
	Street:		
	City:	State:	Zip code:
	Latitude:	Longitude:	
2. Facility Mailing Address(if different from Location)	Street:		
	City:	State:	Zip code:
3. Facility Owner	Name:		Email:
	Street:		Telephone:
	City:	State:	Zip code:
	Contact Person:		
	Is this a federal facility (i.e., owned by the U.S. government)?		☐ Yes ☐ No

4.	Facility Operator (if different from above)	Name:	Email:	
		Street:	Telephone:	
		City:	State:	Zip code:
5.	Facility Industrial Classifications	SIC Code(s):	NAICS Code(s):	
6.	Current Permit Status	Is the facility covered under an individual permit?		☐ Yes ☐ No
		Permit number (if yes):		
		Is there a pending NPDES application on file with EPA for the discharge(s)?		☐ Yes ☐ No
		Date of Submittal (if yes):		
		Attach a topographic map indicating the location of the facility, water sources, points of influent, and outfall(s) to the receiving water		☐ Map Attached

B. Discharge Information

1.	Name of Receiving Water(s):	☐ Freshwater ☐ Marine
2.	Waterbody classification: ☐ Class A ☐ Class B ☐ Class SA ☐ Class SB	
3.	Is the receiving water is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d))?	☐ Yes ☐ No
4.	If the applicant answered yes to B.2, has the applicant identified the designated uses that are impaired, any pollutants indicated, and whether a final TMDL is available for any of the indicated pollutants in a separate attachment to the NOI?	☐ Yes ☐ No

5. Attach a line drawing or flow schematic showing water flow through the facility including all ponds, raceways, and other structures associated with production as well as influent sources, treatment units, outfalls, receiving water(s), and monitoring locations. Indicate any solids dewatering/composting or land application locations (if applicable). Include all waste stream discharges (e.g., tailraces, settling basins, fish tagging operations, laboratories).		☐ Line Drawing Attached
6. For each outfall listed above, provide the following information (attach additional sheets if necessary). Outfalls may be eligible for alternative pH effluent limits. See Parts 1.6.a and 2.5.a of the AQUAGP for additional information. Contact MassDEP or NHDES to determine the required information and protocol to request alternative pH effluent limits.		
Outfall No.	Latitude:	Longitude:
	Discharge is: ☐ Continuous ☐ Intermittent ☐ Seasonal	
	Maximum Daily Flow MGD	Average Monthly Flow MGD
	Alternative pH limits requested? ☐ Yes ☐ No	State approval attached? ☐ Yes ☐ No
Outfall No.	Latitude:	Longitude:
	Discharge is: ☐ Continuous ☐ Intermittent ☐ Seasonal	
	Maximum Daily Flow MGD	Average Monthly Flow MGD
	Alternative pH limits requested? ☐ Yes ☐ No	State approval attached? ☐ Yes ☐ No
Outfall No.	Latitude:	Longitude:
	Discharge is: ☐ Continuous ☐ Intermittent ☐ Seasonal	
	Maximum Daily Flow MGD	Average Monthly Flow MGD
	Alternative pH limits requested? ☐ Yes ☐ No	State approval attached? ☐ Yes ☐ No

C. Operations and Production Information

1. Indicate the type and number of discharge structures at the facility. Provide a brief description of each structure.			
Structure Type	Number of Each	Total Area	Description
Ponds			
Raceways			
Similar Structures (specify) _____			
2. Indicate the type and number of waste management structures at the facility. Provide a brief description of each structure.			
Waste Management Unit	Number of Each	Total Area	Description
Offline Settling Basin			
Full-flow Settling Basin			
Quiescent Zones			
3. Production system (check all that apply)	☐ Flow-through ☐ Recirculating ☐ Other (specify) _____		
4. List the cold-water and/or warm-water aquatic species raised/produced in the table below. For each species listed, indicate the total yearly and maximum harvestable weight (in pounds).			
Species	Type	Harvestable Weight	
		Total Yearly	Maximum
	☐ Cold Water ☐ Warm Water	lbs.	lbs.
	☐ Cold Water ☐ Warm Water	lbs.	lbs.
	☐ Cold Water ☐ Warm Water	lbs.	lbs.

5. Anticipated Production	Do you anticipate any significant increases or decreases in production in the next 5 years?	☐ Yes ☐ No
	If yes, describe:	
6. Indicate the calendar month of maximum feeding and the total mass of food fed (in pounds) during that month.		
Month of Maximum Feeding		Total Mass of Food Fed
		lbs.

D. Aquaculture Drugs and Chemicals

1. List all projected aquaculture drugs and chemicals and maximum daily amounts expected to be used in the next 5 years (use an attachment, if necessary). Indicate any drugs that are Investigational New Animal Drugs (INADs).						
Name	Maximum Daily Amount to be Used		Method of Application	Maximum Amount in Effluent		INAD?
	Amount	Units		Amount	Units	
						☐ Yes ☐ No
						☐ Yes ☐ No
						☐ Yes ☐ No
						☐ Yes ☐ No

E. Water Sources

1. Identify the water source(s) that contribute flow to the facility. For each source, provide the average flow, the time period in which the source contributes flow, and a brief description of treatment, if any.			
Water Source	Average Flow (MGD)	Time Period	Treatment

F. Endangered Species Act (ESA) Certification

Appendix 2 to the AQUAGP explains the certification requirements related to threatened and endangered species and designated critical habitat. Indicate under which criteria the discharge is eligible for coverage under the AQUAGP:	
1. ESA eligibility for species under jurisdiction of USFWS	☐ Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area.” See Appendix 2, Part B for documentation requirements. Documentation attached? ☐ Yes ☐ No
	☐ Criterion B: Formal or informal consultation with the 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. Has the operator completed consultation with USFWS and attached documentation? ☐ Yes ☐ No If no, is consultation underway? ☐ Yes ☐ No
	☐ Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and designated critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered species or designated critical habitat under the jurisdiction of the USFWS. Has the applicant attached documentation of the “no effect” finding? ☐ Yes ☐ No

2. ESA eligibility for species under jurisdiction of NOAA Fisheries	Is the facility located on: the Connecticut River between the Massachusetts/Connecticut state line and Turners Falls, MA; the Taunton River; the Merrimack River between Lawrence, MA and the Atlantic Ocean; the Piscataqua River including the Salmon Falls and Cocheco Rivers; or a marine water?
	☐ Yes ☐ No
	If yes, was the applicant authorized to discharge from the facility under an individual permit?
	☐ Yes ☐ No
	If the discharge is to one of the named rivers above or to a marine water <i>and</i> the facility was not previously covered under an individual permit, has there been any previous formal or informal consultation with NOAA Fisheries?
	☐ Yes ☐ No
	Documentation of consultation attached? ☐ Yes ☐ No

G. National Historic Properties Act (NHPA) Eligibility

1.	Indicate under which criterion the discharge(s) is eligible for covered under the AQUAGP:
☐	Criterion A: No historic properties are present.
☐	Criterion B: Historic properties are present. The discharges and related activities do not have the potential to impact historic properties.
☐	Criterion C: Historic properties are present. The discharges and related activities have the potential to impact or adversely impact historic properties.
2.	Has the applicant attached supporting documentation for NHPA eligibility described in Appendix 3, Part C of the AQUAGP? Yes ☐ No
3.	Does supporting documentation include a written agreement from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or other tribal representative that outlines measures the operation will carry out to mitigate or prevent any adverse effects on historic properties? ☐ Yes ☐ No

H. Supplemental Information

1.	Provide any supplemental information, including antidegradation review information applicable to new or increased discharges. Attach any certifications required by the AQUAGP. Supplemental information attached? ☐ Yes ☐ No
----	--

I. Signature Requirements

1. The NOI must be signed by the operator in accordance with the signatory requirements of 40 CFR § 122.22, including the following certification:	
<i>I certify under penalty of law that no chemical additives are used in the discharges to be authorized under this General Permit except for those used for pH adjustment or anti-freeze purposes and 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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>	
2. Notification provided to the appropriate State, including a copy of this NOI, if required?	☐ Yes ☐ No
Signature:	Date:
Print Name and Title:	

APPENDIX 5
NOTICE OF TERMINATION INSTRUCTIONS
AND SUGGESTED FORMAT

I. Notice of Termination (NOT) Instructions

Operators of facilities and/or operations authorized under the aquaculture general permit (AQUAGP) shall notify EPA and the appropriate State of the termination of discharge(s). The NOT must be either the suggested NOT included in Part II of this Appendix or other official correspondence containing the information required in the instructions below. The NOT must be completed and submitted within thirty (30) days of the permanent cessation of the discharge(s) authorized by the AQUAGP.

A. Instructions for the NOT - The NOT requires the following information:

- 1) Name, mailing address, and discharge location of the facility or site for which the notification is submitted;
- 2) Name, address and telephone number of the operator addressed by the NOT;
- 3) The NPDES permit number assigned;
- 4) An indication that the discharge has been permanently terminated and the reason for the termination (i.e., completion of construction project, termination of temporary discharge);
- 5) Indicate the approximate volume and frequency of the discharge; and
- 6) Signatory requirements according to 40 CFR §122.22 (see NOI instructions) in addition to the following certification:

I certify under penalty of law that all discharges from the identified facility that are authorized by the AQUAGP, have been terminated I understand that by submitting this Notice of Termination (NOT), I am no longer authorized to discharge waters covered by the AQUAGP and that discharging pollutants from the activity previously covered by the AQUAGP is unlawful under the Clean Water Act where the discharge is not authorized by a permit. I also understand that the submission of this NOT does not release an owner/operator from liability for any violation of the AQUAGP or the Clean Water Act.

B. Submission of a NOT –

The completed, signed NOT and attachments must be submitted to EPA either electronically through the Net – Aquaculture General Permit online service (web address to be announced), or mailed to

US Environmental Protection Agency
AQUAGP Processing
Industrial Permit Unit (OEP 06- 4)
5 Post Office Square – Suite 100
Boston, MA 02109-3912

A copy of the NOT must also be filed with the respective state agency. The state agency may elect to develop a state specific form or other additional information requirements.

1. Discharges in Massachusetts

All applicants must provide a completed copy of the Notice of Termination to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
8 New Bond Street
Worcester, MA 01606

2. Discharges in New Hampshire

All applicants must provide a completed copy of their Notice of Termination to:

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

3. Discharges in Vermont

All applicants must provide a completed copy of their Notice of Termination to:

Vermont Department of Environmental Conservation
Watershed Management Division
1 National Life Drive, Main Building, 2nd Floor
Montpelier, VT 05620-3522

II. Suggested Notice of Termination (NOT)

1) Name of site/facility:	Mailing address of site/facility:	
2) Name of the operator:	Address of operator:	
3) NPDES permit number assigned:	Telephone number of operator:	Location of the facility or site: Latitude: _____ Longitude: _____
4) Have all the discharges authorized by the AQUAGP been permanently terminated? Yes No _____. Reason for termination:		
5) Signatory requirements according to 40 CFR § 122.22 and certification: <i>I certify under penalty of law that all discharges from the identified facility that are authorized by the AQUAGP have been terminated. I understand that by submitting this Notice of Termination (NOT), I am no longer authorized to discharged waters covered by the AQUAGP and that discharging pollutants from the activity covered by the AQUAGP is unlawful under the Clean Water Act where the discharge is not authorized by a permit. I also understand that the submission of this NOT does not release an owner/operator from liability for any violation of the AQUAGP or the Clean Water Act.</i> Signature of operator _____ Date _____. Title:		

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

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¹ Updated July 17, 2018 to fix typographical errors.

NPDES PART II STANDARD CONDITIONS
(April 26, 2018)

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

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

- (d) *False Statement.* The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
- (2) *Civil Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).
- (3) *Administrative Penalties.* The CWA provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty as follows:
 - (a) *Class I Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act, the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).
 - (b) *Class II Penalty.* Not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act the 2015 amendments to the Federal Civil Penalties Inflation Adjustment Act of 1990, 28 U.S.C. § 2461 note, and 40 C.F.R. Part 19. *See* Pub. L.114-74, Section 701 (Nov. 2, 2015); 83 Fed. Reg. 1190 (January 10, 2018).

2. Permit Actions

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

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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

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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

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

d. *Prohibition of bypass.*

- (1) Bypass is prohibited, and the Director may take enforcement action against a Permittee for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (c) The Permittee submitted notices as required under paragraph 4.c of this Section.
- (2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 4.d of this Section.

5. Upset

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

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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

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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.

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- 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

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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

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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

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“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 96-483 and 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

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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

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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.

LC₅₀ means the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC₅₀ = 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

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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).

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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

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(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

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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

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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.

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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

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kg/day	Kilograms per day
lbs/day	Pounds per day
mg/L	Milligram(s) per liter
mL/L	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH ₃ -N	Ammonia nitrogen as nitrogen
NO ₃ -N	Nitrate as nitrogen
NO ₂ -N	Nitrite as nitrogen
NO ₃ -NO ₂	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
Surfactant	Surface-active agent
Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
µg/L	Microgram(s) per liter
WET	“Whole effluent toxicity”
ZID	Zone of Initial Dilution

APPENDIX 7
SUGGESTED NOTICE OF CHANGE (NOC)
FORMAT AND INSTRUCTIONS

I. Notice of Change Instructions

Permittees covered under the aquaculture general permit (AQUAGP) may provide notification of or request a change to certain conditions of their authorization to discharge without submission of a new NOI. Unless otherwise noted, a requested change does not become effective until an operator receives written approval from EPA. A NOC must be submitted using either the suggested format provided with this appendix or in a form of correspondence containing all of the information required in A through C, below. If using the suggested format electronically, the signature page must be printed, signed and either scanned and attached to the electronic submittal or mailed in hard copy to the addresses listed in D, below.

At a minimum, the operator must provide the following information:

A. General site information

1. NPDES permit number assigned by EPA.
2. Site name and location, including street address.
3. Site **owner's** name, mailing address, telephone number(s), and email address. Indicate an individual that serves as the point of contact.
4. Site **operator's** name, mailing address, telephone number(s), and email address, if different from the site owner's information. Indicate an individual that serves as the point of contact.
5. Discharge identification, such as the outfall number. Include the discharge location (i.e., longitude and latitude), and receiving water(s).

B. Type of change(s) requested

1. Indicate the type of eligible change being requested or the notification being provided. Change requests and notifications that should be submitted using a NOC are for the following circumstances:
 - a. Request for a change in pH range for sites in New Hampshire and Massachusetts: A NOC must be submitted to request a change in pH range. An operator must request

and receive approval from NHDES or MassDEP for a change in pH range prior to submitting a NOC to EPA. Supporting documentation from the State must be provided with the NOC. Written approval by EPA is required for this change to be effective.

- b. Request to discharge new or substitute chemical(s) and/or additive(s): A NOC must be submitted when an operator intends to discharge a chemical or additive that is allowed by the general permit and that was not disclosed in the NOI submitted for a facility. Written approval by EPA is required for this change to be effective. For each chemical that is requested to be used by the permittee, the following data must be supplied with the NOC:
 - (1) Name and manufacturer,
 - (2) Maximum and average daily quantity that is proposed to be used on a monthly basis as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and
 - (3) Any aquatic toxicity values or other toxicological information from the vendor or other source.
 - c. Notification of change to administrative information: This includes, but is not limited to: a change in the address for an owner or operator; a change in contact information for an owner or operator; and a change in ownership, so long as the operator authorized to discharge under this general permit remains unchanged. A requested change to administrative information is automatic unless EPA notifies the operator otherwise. Examples of when EPA is likely to provide such notification is when EPA intends to revoke and reissue coverage under this general permit or intends to issue an individual permit. For a change in ownership, the new owner must submit:
 - (1) Written notification to EPA no more than thirty (30) days following the date of ownership change; and
 - (2) Written notification containing the new ownership information, the specific date for ownership change, and an acknowledgement of permit responsibility, coverage, and liability by the new owner.
- 2. Attach a brief narrative statement that describes the change consistent with Part B.1. above. Include any written rationale or supporting documentation for the change as well as any monitoring data, if required.

C. Certification requirement

- 1. The NOC must be signed in accordance with the signatory requirements of 40 CFR §

122.22 and include 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.

2. Notification Requirements

All operators must certify that notification has been provided to MassDEP, NHDES, or VTDEC.

D. Submission of NOCs

1. Submit NOCs to EPA electronically through the Net – Aquaculture General Permit online service (web address to be announced) or, where an operator is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes submittal in electronic format, in hard copy form to:

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP AQUAGP Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109-3912

2. Submit NOCs to the appropriate State

A copy of a NOC submitted to EPA must also be submitted to the appropriate State. For submittal addresses, see Part I.C.2 of Appendix 4 of the AQUAGP.

II. Suggested Format for the AQUAGP Notice of Change (NOC)

A. General site information

1. NPDES permit number assigned by EPA:			
2. Name of site:	Site address:		
	Street:		
	City:	State:	Zip:
3. Site owner	Contact Person:		
	Telephone:	Email:	
	Mailing address:		
	Street:		
	City:	State:	Zip:
4. Site operator, if different than owner	Contact Person:		
	Telephone:	Email:	
	Mailing address:		
	Street:		
	City:	State:	Zip:
5. Discharge identification:	Discharge location:	Receiving water(s):	

B. Type of change(s) requested

Requested change (check all that apply):	
☐	1. Request for a change in pH range approved by NHDES or MassDEP, based on supporting documentation attached in accordance with Part I.B.1.b of the NOC instructions. Written approval by EPA is required for this change to be effective.
☐	2. Request to discharge chemical(s) and/or additive(s) that were not disclosed in the NOI submitted for the site, based on written rationale and/or monitoring data attached in accordance with Part I.B.1.c of the NOC instructions. Written approval by EPA is required for this change to be effective.
☐	3. Change to administrative information. Supporting documentation is attached in accordance with Part I.B.1.d of the NOC instructions.

C. Certification requirement

<i>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.</i>	
Notification provided to the appropriate State, including a copy of this NOC.	Check one: Yes ☐ No ☐
Signature:	Date:
Print Name and Title:	

APPENDIX 8

DILUTION FACTOR AND EFFLUENT LIMITATION CALCULATIONS FOR MASSACHUSETTS

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:

$$\text{Dilution Factor} = \frac{Q_s + Q_D}{Q_D}$$

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, hydrogen peroxide, and copper, as specified in Part 1.1 and 1.3 of the AQUAGP. A suggested electronic format for the calculations required in this appendix can be downloaded from EPA's website available at: <https://www.epa.gov/npdes-permits/draft-aquaculture-general-permit>.

A. Calculate Water Quality Criterion for Copper

This calculation must be completed to: 1) convert the WQBELs expressed in terms of dissolved copper to total recoverable copper; and 2) adjust the WQBELs based on the site-specific receiving water hardness. Use the equations and appropriate factors as specified in 314 CMR 4.05(5)(e) (or as revised), and calculate the criteria as specified in Parts II.A.1 and 2 for freshwater and Part II.A.3 for saltwater:

1. When the receiving water is a freshwater waterbody, calculate downstream hardness as:

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

Where:

C_r = Downstream hardness in mg/L

Q_d = Discharge flow in MGD¹

C_d = Discharge hardness in mg/L²

Q_s = Upstream flow (i.e., 7Q10) in MGD

C_s = Upstream hardness in mg/L³

Q_r = Downstream receiving water flow in MGD⁴

2. Calculate the total recoverable water quality criterion adjusted for hardness as:

$$WQC \text{ in } \mu\text{g/L} = \exp\{0.9422 [\ln(h)] - 1.700\}$$

Where:

$\ln$ = Natural logarithm

h = Downstream hardness in mg/L, as calculated in Step 1

3. When the receiving water is a saltwater waterbody, calculate the total recoverable water quality criterion as:

¹ Equal to the effluent flow limitation.

² For sample sizes less than 10, the maximum value is used for C_d . For samples sizes of 10 or greater, the 95th percentile of the values may be used.

³ If the sample size is greater than 1, the median value may be used.

⁴ Equal to the sum of the upstream 7Q10 and the discharge flow. If available, a downstream 7Q10 may be used.

$$WQC \text{ in } \mu g/L = \frac{\text{dissolved WQC in } \mu g/L}{\text{dissolved to total recoverable factor}} = \frac{4.8 \mu g/L}{0.83} = 5.8 \mu g/L$$

B. 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 $\mu g/L$

Q_r = Downstream receiving water flow in MGD⁵

C_r = Downstream concentration (i.e., water quality criterion) in $\mu g/L$ ⁶

Q_s = Upstream flow (i.e., 7Q10) in MGD

C_s = Upstream concentration in $\mu g/L$ ⁷

Q_d = Discharge flow in MGD⁸

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

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

⁵ Equal to the sum of the upstream 7Q10 and the discharge flow. If available, a downstream 7Q10 may be used.

⁶ 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.

⁷ If the sample size is greater than 1, the median value may be used.

⁸ Equal to the effluent flow limitation.

APPENDIX 9

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 values¹. 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.

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

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 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 suggested electronic format for the calculations required in this appendix can be downloaded from EPA's website available at: <https://www.epa.gov/npdes-permits/draft-aquaculture-general-permit>.

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 $\mu\text{g/L}$

Q_r = Downstream receiving water flow in MGD^2

C_r = Downstream concentration (i.e., water quality criterion) in $\mu\text{g/L}^3$

0.9 = Factor to reserve 10 percent of the receiving water's assimilative capacity

Q_s = Upstream flow (i.e., 7Q10) in MGD

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.

C_s = Upstream concentration in $\mu\text{g/L}$ ⁴

Q_d = Discharge flow in MGD⁵

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:

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

⁴ If the sample size is greater than 1, the median value may be used.

⁵ Equal to the effluent flow limitation.

APPENDIX 10

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 and hydrogen peroxide, as specified in Part 3.1 of the AQUAGP. A suggested electronic format for the calculations required in this appendix can be downloaded from EPA's website available at: <https://www.epa.gov/draft-aquaculture-general-permit>.

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 $\mu\text{g/L}$

Q_r = Downstream receiving water flow in MGD¹

C_r = Downstream concentration (i.e., water quality criterion) in $\mu\text{g/L}$ ²

Q_s = Upstream flow (i.e., 7Q10) in MGD

C_s = Upstream concentration in $\mu\text{g/L}$ ³

Q_d = Discharge flow in MGD⁴

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 chlorine¹ (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.
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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 TEST¹

1. Test type	48hr Static, non-renewal
2. Salinity	25ppt $\pm$ 10 percent for all dilutions by adding dry ocean salts
3. Temperature ($^{\circ}$ C)	20 $^{\circ}$ C $\pm$ 1 $^{\circ}$ C or 25 $^{\circ}$ C $\pm$ 1 $^{\circ}$ C, temperature must not deviate by more than 3 $^{\circ}$ C during test
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml (minimum)
7. Test solution volume	200 ml/replicate (minimum)
8. Age of test organisms	1-5 days, <u>$\leq$ 24 hours age range</u>
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 <u>Artemia</u> 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	$\geq$ 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 TEST¹**

1. Test Type	48 hr Static, non-renewal
2. Salinity	25 ppt $\pm$ 10 % by adding dry ocean salts
3. Temperature	20°C $\pm$ 1°C or 25°C $\pm$ 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 <u>Artemia</u> 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 $\geq$ 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.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Level for effluent^{*1} (mg/L)</u>
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
<u>Total Metals</u>			
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-Kärber
- Trimmed Spearman-Kärber
- 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:
 - o Facility name
 - o NPDES permit number
 - o Outfall number
 - o Sample type
 - o Sampling method
 - o Effluent TRC concentration
 - o Dilution water used
 - o Receiving water name and sampling location
 - o Test type and species
 - o Test start date
 - o Effluent concentrations tested (%) and permit limit concentration
 - o Applicable reference toxicity test date and whether acceptable or not
 - o Age, age range and source of test organisms used for testing
 - o Results of TAC review for all applicable controls
 - o Permit limit and toxicity test results
 - o 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.

USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

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

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

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

II. METHODS

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

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

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

III. SAMPLE COLLECTION

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

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

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

IV. DILUTION WATER

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

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

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

and

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

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

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

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

V. TEST CONDITIONS

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

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS¹

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

series.

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

Footnotes:

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

**EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW
(PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST¹**

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

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

Footnotes:

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

VI. CHEMICAL ANALYSIS

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

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

Notes:

- 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)
- 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
- Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

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

No Observed Acute Effect Level (NOAEL)

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

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

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

Attachment 13
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.