

**PART 3. VERMONT GENERAL PERMIT, PERMIT NO. VTG130000**

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

This General Permit modification shall become effective on the first day of the calendar month immediately following 30 days after signature.

The modified permit and the authorization to discharge expire at midnight on June 30, 2026.

This modified permit is issued pursuant to 40 CFR § 124.5, and revises and supersedes the relevant portions of the permit that was issued on May 6, 2021.

Signed this    day of            , 2022

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

### 1.1 Requirements for Discharges from Fish Hatcheries

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

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

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

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

**Footnotes**

<sup>1</sup> Effluent samples shall yield data representative of the discharge. A routine sampling program shall be developed in which samples are taken at the discharge point to the receiving water after treatment by any settling system, prior to co-mingling with any other waste stream. The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 Code of Federal Regulations (CFR) Part 136.

- <sup>2</sup> In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except whole effluent toxicity, or WET). A method is “sufficiently sensitive” when: 1) the method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) the method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. MLs may be obtained in several ways: they may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.
- <sup>3</sup> When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the ML for that parameter (e.g., < 50 µg/L, if the ML for a parameter is 50 µg/L). For calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).
- <sup>4</sup> Measurement frequency of 1/day is defined as the recording of one measurement for each 24-hour period. Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 2/month is defined as the sampling of two discharge events in each calendar month; these events cannot occur on the same day but can occur during the same week as long as both events represent worst-case conditions, as described in Part 7. Measurement frequency of 1/quarter is defined as the sampling of one discharge event in each calendar quarter. Measurement frequency of 2/quarter is defined as the sampling of a discharge event in 2 out of the 3 months of the calendar quarter; a NODI: 9 code can be used for the month not sampled in a given quarter. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.
- <sup>5</sup> Each composite sample must consist of at least eight grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.
- <sup>6</sup> Permittees may request to perform grab sampling in lieu of composite sampling, or an alternative composite sampling schedule (e.g., collected over 8 hours), if they can demonstrate to the satisfaction of EPA and the State that the alternative sampling plan will effectively characterize the average daily flow of effluent discharges. To make this demonstration, Permittees may provide information on residence times in treatment units (e.g., settling basins) and/or provide monitoring data. EPA will notify the Permittee in writing that an alternative sampling procedure is authorized.
- <sup>7</sup> For flow, calculate the average monthly flow by dividing total estimated or recorded gallons discharged each month by number of days of discharge in that month. Flow can be measured or estimated. For those quarters when a discharge does not occur, the Permittee must still submit the DMR with the appropriate no discharge (NODI) code for each parameter. A written explanation for the NODI code is also required with the DMR report.
- <sup>8</sup> Permittees with a total annual production greater or equal to 100,000 lbs per year shall conduct monthly monitoring.
- <sup>9</sup> Permittees with a total annual production less than 100,000 lbs per year shall conduct quarterly monitoring.

- <sup>10</sup> Total Nitrogen shall be determined by summing total Kjeldahl nitrogen, nitrite-nitrogen, and nitrate-nitrogen concentrations from samples collected concurrently. For example, by performing the “Total Kjeldahl Nitrogen (as N)” test and the “Nitrate-Nitrite (as N)” test and adding the two test results together to produce a value for mg/L of Total Nitrogen.
- <sup>11</sup> Permittees shall be subject to an annual nutrient optimization reporting requirement as a supplement to their BMP Plan, provided in Part 5.5 of this General Permit.
- <sup>12</sup> White River National Fish Hatchery shall be subject to an average monthly Total Ammonia limit of 2.3 mg/L with a monitoring frequency of 2/quarter, consistent with the derivation of the effluent limitation from the 2009 individual permit (NPDES No. VT0020711) updated to the most recent state water quality standards.
- <sup>13</sup> Dwight D. Eisenhower National Fish Hatchery shall be subject to an average monthly Total Ammonia limit of 0.7 mg/L and a maximum daily Total Ammonia limit of 3.4 mg/L with a monitoring frequency of 2/quarter, consistent with the derivation of the effluent limitation from the 2009 individual permit (NPDES No. VT0000451) updated to the most recent state water quality standards.
- <sup>14</sup> Total Phosphorus analysis must be completed using a test method from 40 C.F.R. Part 136 that achieves an ML of 10 µg/L. All hatcheries except those referenced in Footnote 15 are subject to once per quarter monitoring frequency.
- <sup>15</sup> Permittees within the Lake Champlain watershed shall be subject to Total Phosphorus limitations provided in Part 3.2 of this General Permit.

<sup>16</sup> **Monitoring and reported is required once per discharge event during raceway treatment with formalin. For egg treatment, at a minimum, monitoring is required twice per month during different treatment weeks. On days when formalin is used but no sampling is required, the Expected Environmental Concentration (EEC) of formaldehyde shall be calculated using the following equation:**

$$\text{EEC} = \text{concentration of formaldehyde used (mg/L)} * \text{volume of product used (gallons)} / \text{estimated volume water discharged (gallons)}$$

**Where the concentration of formalin would be multiplied by the percent formaldehyde (0.37) to get the concentration of formaldehyde used, the volume of product used would be the volume of formaldehyde product used, and the volume discharged is the entire daily water discharge through the hatchery minus the volume of formalin product added. Formalin shall not be discharged if the EEC is above the daily maximum effluent limitation unless effluent sampling demonstrates compliance with the limitation. EEC calculations shall be submitted as an attachment to the monthly DMR. When formalin is not in use, the Permittee should report a “NODI:9” code on the applicable DMR.**

**Monitoring for dissolved oxygen is required during formalin use. When formalin is not in use, the Permittee should report a “NODI: 9” code on the applicable DMR.**

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

50 µg/L.

- <sup>18</sup> The water quality-based effluent limitation (WQBEL) is shown with zero dilution. The WQBEL must be adjusted using the calculation methodology included in Appendix 10 for sites located in Vermont.
- <sup>19</sup> Applies to all waters that the Secretary of the Agency of Natural Resources determines are salmonid spawning or nursery areas important to the establishment or maintenance of the fishery resource.
- <sup>20</sup> Applies to all other waters.
- <sup>21</sup> Monitoring and reporting is only required during hydrogen peroxide use. When hydrogen peroxide is not in use, the Permittee should report a “NODI: 9” code in the applicable DMR.
- <sup>22</sup> Monitoring and reporting is only required during chlorine use or if the discharge is likely to contain residual chlorine (e.g., potable water is in use or chlorine is a chemical used for and/or a byproduct of treatment). The ML for total residual chlorine is defined as 0.02 mg/L. This value is the minimum level for chlorine using EPA approved methods found in Standard Methods for the Examination of Water and Wastewater, 20th Edition, Method 4500 CL-E and G, or EPA Manual of Methods of Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 0.02 mg/L, compliance/noncompliance will be determined based on the ML. Sample results of 0.02 mg/L or less shall be reported as “<0.02” on the DMR. When chlorine is not in use and the discharge is unlikely to contain residual chlorine, the Permittee should report a “NODI: 9” code in the applicable DMR.
- <sup>23</sup> Efficiency of Fish Feed Used = [Wet Weight of Fish Gained (lbs)/Dry Weight of Feed Applied (lbs)] x 100
- <sup>24</sup> Receiving water samples shall be taken concurrently with effluent samples (i.e., the receiving water grab samples shall be taken during the 24-hour composite period for the effluent). To the extent practicable, receiving water samples shall be collected following a minimum of 72 hours with no precipitation (i.e., dry weather).
- <sup>25</sup> Upstream is defined as a location representative of ambient receiving water conditions prior to mixing with effluent from the hatchery. Downstream is defined as a location representative of the receiving water after complete mixing with the effluent from the hatchery.