

NORTHCENTRAL REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type Renewal
 Facility Type Industrial
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
ADDENDUM**

Application No. PA0039144
 APS ID 1002931
 Authorization ID 1290567

Applicant and Facility Information

| | |
|---|---|
| Applicant Name <u>PA Fish & Boat Commission</u> | Facility Name <u>Oswayo State Fish Hatchery</u> |
| Applicant Address <u>1735 Shiloh Road</u> <u>State College, PA 16801-8400</u> | Facility Address <u>96 State Route 244 E</u> <u>Coudersport, PA 16915-8290</u> |
| Applicant Contact <u>Mindy Mcclenahan</u> | Facility Contact _____ |
| Applicant Phone <u>(814) 353-2229</u> | Facility Phone _____ |
| Client ID <u>87637</u> | Site ID <u>257376</u> |
| SIC Code <u>0921</u> | Municipality <u>Oswayo Township</u> |
| SIC Description <u>Agriculture - Fish Hatcheries And Preserves</u> | County <u>Potter</u> |
| Date Published in PA Bulletin <u>December 14, 2024</u> | EPA Waived? <u>Yes</u> |
| Comment Period End Date <u>January 28, 2025</u> | If No, Reason _____ |
| Purpose of Application <u>Application for a renewal of an NPDES permit for discharge of treated Industrial wastewater</u> | |

Internal Review and Recommendations

A draft permit for the Oswayo State Fish Hatchery was sent out by the Department on November 27, 2024. The draft comment period was extended by the Department, at the request of PFBC, by 15 days until January 28, 2025. The only comments received on the draft are from the permittee and internal DEP comments. Based on the comments, a redraft will be required. The following will be a summary of the comments and the Department's response to each comment.

PFBC Comments

Comment: PFBC provided an updated discharge flow rate of 3.22 MGD as a long-term average over the past 5 years.

Response: The Department will recalculate all effluent limitations based on a design discharge flow of 3.22 MGD, not 2.62 MGD as used during the draft proposal.

Comment: PFBC requests the proposed sampling frequencies for dissolved phosphorus and total phosphorus be changed from 1/week to 1/month, as per other hatchery monitoring frequencies.

Response: The proposed sampling frequencies of 1/week were proposed based on Chapter 2.C of the Department's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001). The Department's "Clean Water Program New and Reissuance Industrial Waste and Industrial Stormwater Individual NPDES Permit Applications SOP No. BCW-PMT-001" allows to maintain existing sampling frequencies if there are 2 years of compliance. Based on a long history of compliance with the dissolved and total phosphorus limitations, the Department will propose the sampling frequency to 2/month, as per the existing permit.

| Approve | Return | Deny | Signatures | Date |
|---------|--------|------|--|-------------------|
| X | | | <i>Chad A. Fabian</i> Chad A. Fabian / Project Manager | February 20, 2025 |
| X | | | <i>Nicholas W. Hartranft, P.E. </i> Nicholas W. Hartranft, P.E. / Environmental Engineer Manager | February 23, 2025 |
| X | | | <i>Thomas M. Randis</i> Thomas M. Randis / Program Manager | February 24, 2025 |

Internal Review and Recommendations

Comment: "In Part A, Section I.A. on page 2, the Commission recommends thn at the "Minimum Measurement Frequency" for Formaldehyde be changed to 2/month (when therapeutic chemical is in use), instead of 1/week. It is also recommended that the "Required Sample Type" for Formaldehyde be changed to 3 Grabs/24 Hours. These recommendations are in line with other Commission hatcheries that have similar CAAP limitations."

Response: The Department considers formaldehyde to be a priority pollutant. Therefore, 1/week monitoring was established in accordance with Table 6-4 of the Department's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001). However, based on the long history of compliance and the above referenced Department SOP for reissuance of IW NPDES permits, the Department will maintain a 2/month sampling frequency as in the existing NPDES permit. The sampling method will go back to 3 Grabs/24 hours, as requested.

Comment: "In Part A, Section I.B. on page 3, the Commission recommends that the "Minimum Measurement Frequency" for Temperature should be Continuous, instead of 1/week. This recommendation is in line with other Commission hatcheries that have similar CAAP limitations."

Response: The Department will grant your request for continuous temperature monitoring.

Comment: "In Part A, Section I.B. on page 4, the Commission recommends that the "Average Monthly Mass Units" for Ammonia-Nitrogen (NH3) be changed to 26 lbs/day, instead of 19.2 lbs/day. We also recommend that the "Daily Maximum Mass Units" for NH3 be changed to 53 mg/L instead of 38.5 lbs/day. This recommendation matches the mass units in Part A, Section I.A. on page 2."

Response: All mass limitations will need to be recalculated since the discharge was re-evaluated using the new discharge flow rate of 3.22 MGD. An explanation of the proposed mass limits can be found under the proposed effluent limits section below.

Comment: "In Part A, Section I.B. on page 4, the Commission recommends that the "Average Monthly Mass Units" for Dissolved Phosphorus (Dissolved PO4) be changed to 8 lbs/day, instead of 5.7 lbs/day. We also recommend that the "Daily Maximum Mass Units" for Dissolved PO4 be changed to 16 lbs/day instead of 11.5 lbs/day. This recommendation matches the mass units in Part A, Section I.A. on page 2."

Response: All mass limitations will need to be recalculated since the discharge was re-evaluated using the new discharge flow rate of 3.22 MGD. An explanation of the proposed mass limits can be found under the proposed effluent limits section below.

Comment: "In Part A, Section I.B. on page 4, the Commission recommends that the "Minimum Measurement Frequency" for Dissolved Phosphorus (Dissolved PO4) and Total Phosphorus be changed to 2/month, instead of 1/week. This recommendation is in line with other Commission hatcheries that have similar CAAP limitations."

Response: Based on the long history of compliance and the above referenced Department SOP for reissuance of IW NPDES permits, the Department will grant the PFBC request and will propose the existing 2/month monitoring frequency in the redrafted permit.

Comment: In Part A, Section III.E. on page 16, the Commission requests adding this sentence to the end of the first paragraph to read, "the Commission is exempt from these fees".

Response: The Department concurs. This language will be amended, or the condition eliminated, in the redraft.

Comment: In Part C, Section II.A.1, on page 21, the Commission recommends removing Parasite-S (Formalin) from the Therapeutic Chemical Additives List. Parasite-S is the brand name for the 37% Formaldehyde solution that is used at the hatchery. It is redundant because there are limitations set in Part A to control the usage of Formalin (37% Formaldehyde).

Response: The Department agrees that a Parasite-S/Formalin usage rate is redundant with a formaldehyde effluent limitation. Therefore, this chemical additive will be removed from the respective condition.

Internal Review and Recommendations

Comment: "In Part C, Section II.A.1. on page 21, the Commission recommends that the "Allowable Usage Rate" for 35% Hydrogen Peroxide in the Therapeutic Chemical Additive List be changed to 300 lbs/day. This increase will allow for staff to treat fish appropriately for illnesses and diseases and is in accordance with FDA and Veterinarian recommendations. This is a lower usage rate than other northcentral hatcheries that also discharge into HQ-CWF receiving streams. In addition, per the SDS sheet, 99% biodegradation of hydrogen peroxide will occur within 30 minutes of being used within the hatchery. The exchange rate of the polishing pond alone is 1.5 hours. All discharged water goes through the polishing pond prior to discharge."

Response: As detailed in the original draft fact sheet, the Department utilized the 99% biodegradation rate in 30 minutes when calculating the maximum allowable usage rate of hydrogen peroxide. Hydrogen peroxide has been reevaluated during this redraft using the new discharge rate of 3.22 MGD. The proposed allowable usage rate of hydrogen peroxide will now be 65 lbs/day.

Internal DEP Comments

Comments were received from the Operations Section of Clean Water on the draft permit. One comment noted that the interim monitoring period ended Oct. 30th, excluding October 31st. This will be corrected in the next draft. Additionally, a comment noted that the draft permit did not have the sampling while bypassing Part C Condition that is currently in the PFBC hatchery permits. This special condition will be included in the next draft along with the hatchery management plan condition.

Chemical Additives

The following is a summary of the proposed therapeutic chemicals and their allowable usage rate with the updated discharge flow of 3.22 MGD:

| Therapeutic Chemical | Proposed Usage Rate | WQBEL (mg/l) | Allowable Usage Rate (lbs/day) |
|---|---------------------|--------------|--------------------------------|
| Terramycin 200 | 3.5 lbs/day | 1.07 | 44.9 |
| Chloramine-T (Halamid) | 6.0 lbs/day | 0.53 | 21.1 |
| 35% Hydrogen Peroxide ⁽¹⁾ | 10 gal/day* | 0.015 | 65 |
| Lysol Professional Brand (No Rinse Sanitizer) | 1.08 gal/day | 0.0007 | 0.031 |
| Florfenicol | 0.2 lbs/day | 1.7 | 71.3 |
| Sodium Chloride ⁽²⁾ | 200 lbs/day | n/a | 200 |

*Values must be converted and reported in lbs/day on report form

- (1) The TMS shows a maximum daily usage rate of 0.65 pounds. However, per the MSDS sheet, 99% biodegradation of the hydrogen peroxide will occur within 30 minutes of being used in the hatchery. Since the expected pass through time in the facility until discharge is greater than 30 minutes, the maximum daily usage rate has been adjusted to provide for 65 pounds per day to be discharged.
- (2) There is not a water quality standard for sodium chloride. There is a Potable Water Supply (PWS) standard, but it does not apply since the nearest public water intake is the PA/NY border more than 20 miles downstream of the discharge. There is not expected to be any impact at the border from the use of sodium chloride.

In addition to the above therapeutic chemicals, the TMS was also used to verify that the existing WQBEL limitations for formaldehyde are protective of water quality standards. The results of the model show that the existing average monthly limitations for formaldehyde of 0.6 mg/l are adequate. No other toxics are expected to be introduced at the hatchery.

Per the Department's SOP for Reissuance of IW NPDES Permits, the Department's WQM 7.0 model does not need to be run since there are limits for BOD5 and TSS that are less than 25 mg/l and 30 mg/l, respectively.

Proposed INTERIM Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ.

Outfall 001, Effective Period: Permit effective date through 3 years after effective date.

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|----------------------------------|-------------------------------------|---------------|-----------------------|-----------------|---------------|------------------|--|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | | | Minimum ⁽²⁾ Measurement Frequency | Required Sample Type |
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 1/week | Metered |
| pH (Standard Units) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/week | Grab |
| Dissolved Oxygen | XXX | XXX | 6.0 | XXX | XXX | XXX | 1/week | Grab |
| CBOD5 | 161 | 322 | XXX | 6.0 | 12.0 | 15.0 | 2/month | 24-Hr Composite |
| Total Suspended Solids | 161 | 322 | XXX | 6.0 | 12.0 | 15.0 | 2/month | 24-Hr Composite |
| Ammonia-Nitrogen | 27 | 54 | XXX | 1.0 | 2.0 | 2.5 | 2/month | 24-Hr Composite |
| Dissolved Phosphorus | 8 | 16 | XXX | 0.3 | 0.6 | 0.75 | 2/month | 24-Hr Composite |
| Total Phosphorus | Report | Report | XXX | Report | Report | Report | 2/month | 24-Hr Composite |
| Formaldehyde | 16 | 32 | XXX | 0.6 | 1.2 | 1.5 | 2/month | 3 grabs/24 hrs |
| Temperature (°F) | XXX | XXX | XXX | XXX | Report | XXX | Continuous | I-S |
| PFAS (PFOS, PFOA, PFBS, HFPO-DA) | XXX | XXX | XXX | XXX | Report | XXX | 1/quarter | 24-Hr Composite |

The above proposed interim limitations and monitoring frequencies are the same as the existing permit and draft permit, except minor changes to mass limitations based on the new design flow of 3.22 MGD.

Proposed Effluent Limitations and Monitoring Requirements-Final

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Daily Maximum limits were established using multiplier of 2.0, while Instantaneous Maximum (IMAX) limits are determined using multipliers of 2.5 per the Department’s Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 362-0400-001). Sample frequencies and types are derived from the “NPDES Permit Writer’s Manual” (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: 3 Years after effective date through Expiration Date.

| Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|--|-------------------------------------|---------------|-----------------------|-----------------|---------------|------------------|--|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | | | Minimum ⁽²⁾ Measurement Frequency | Required Sample Type |
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 1/week | Metered |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 1/week | Grab |
| DO | XXX | XXX | 6.0 | XXX | XXX | XXX | 1/week | Grab |
| BOD ₅ effluent net ⁽¹⁾ | 112 | 224 | XXX | 5.0 | 10.0 | XXX | 1/week | 24-Hr Composite |
| BOD ₅ influent | XXX | XXX | XXX | Report | Report | XXX | 1/week | 24-Hr Composite |
| BOD ₅ | Report | Report | XXX | Report | Report | 12.5 | 1/week | 24-Hr Composite |
| TSS effluent net ⁽¹⁾ | 101 | 202 | XXX | 4.5 | 9.0 | XXX | 1/week | 24-Hr Composite |
| TSS influent | XXX | XXX | XXX | Report | Report | XXX | 1/week | 24-Hr Composite |
| TSS | Report | Report | XXX | Report | Report | 11.2 | 1/week | 24-Hr Composite |
| Ammonia-Nitrogen ⁽¹⁾ | 22.4 | 44.8 | XXX | 1.0 | 2.0 | 2.5 | 1/week | 24-Hr Composite |
| Dissolved Phosphorus ⁽¹⁾ | 6.7 | 13.5 | XXX | 0.3 | 0.6 | 0.75 | 2/month | 24-Hr Composite |
| Total Phosphorus | Report | Report | XXX | Report | Report | XXX | 2/month | 24-Hr Composite |
| Formaldehyde | 16 | 32 | XXX | 0.6 | 1.2 | 1.5 | 2/month | 3 Grabs/24 Hours |
| Temperature (°F) | XXX | XXX | XXX | XXX | Report | XXX | Continuous | I-S |
| TSS Annual Load ⁽²⁾ | 21,411 lbs/year | XXX | XXX | XXX | XXX | XXX | 1/year | Calculation |
| PFAS (PFOS, PFOA, PFBS, HFPO-DA) | XXX | XXX | XXX | XXX | Report | XXX | 1/quarter | 24-Hr Composite |

- (1) As discussed in the pervious draft fact sheet, in order to address the impacts from nutrients to Oswayo Creek the Department recommends that mass loadings to Oswayo Creek be equivalent to the mass loadings on Fishing Creek from the Tylersville State Fish Hatchery. Tylersville's discharge into Fishing Creek is 50.3% effluent contribution of the total flow below the outfall. Fishing Creek has a $Q_{7,10}$ of 7.3 cfs and a discharge flow of 7.4 cfs. The effluent contribution was determined by taking $Q_{\text{Discharge}} / (Q_{\text{Discharge}} + Q_{7,10})$ or $7.4 \text{ cfs} / 14.7 = 50.3\%$. At Oswayo SFH, the design discharge flow is 3.22 MGD or 5.98 cfs with a $Q_{7,10}$ of 2.47 cfs. Using the same equation, the effluent comprises 70.7% of the downstream flow. In order to place the same nutrient and TSS mass loading on Oswayo Creek that exists on Fishing Creek from the Tylersville SFH, a decrease in loading of 20.4% (70.7%-50.3%) is required. The recommended TSS and nutrient load limitations are based on that 20.4% reduction as implement the same loading on Oswayo Creek as at Fishing Creek.
- (2) Using the discharge flow and Oswayo Creek $Q_{7,10}$, this proposed annual TSS loading limitation is equivalent to the TSS loading limitation of 42,705 pounds per year that exists at Tylersville SFH.

The Department recommends redrafting the NPDES permit with the above recommended changes proposed in this fact sheet addendum.