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DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHCENTRAL REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0010553**
Facility Type	**Industrial**	APS ID	**987392**
Major / Minor	**Minor**	Authorization ID	**1263208**

NPDES PERMIT FACT SHEET ADDENDUM

Applicant and Facility Information

Applicant Name	**Pennsylvania Fish and Boat Commission**	Facility Name	**Benner Spring State Fish Hatchery**
Applicant Address	1735 Shiloh Road	Facility Address	1735 Shiloh Road
	State College, PA 16801-8495		State College, PA 16801-8495
Applicant Contact	Mindy McClenahan	Facility Contact	
Applicant Phone	(814) 353-2229	Facility Phone	
Client ID	135455	Site ID	442119
SIC Code	0921	Municipality	Benner Township
SIC Description	Agriculture - Fish Hatcheries and Preserves	County	Centre
Date Published in PA Bulletin	2/25/23	EPA Waived?	Yes
Comment Period End Date	3/27/23	If No, Reason	
Purpose of Application	Application for a renewal of an NPDES permit for discharge of treated Industrial		

A draft permit was sent by the Department on February 6, 2023. Comments were received from EPA (see attached) and from the permittee (see attached) during the first draft permit cycle. No internal comments were received. These comments will result in a re-draft, as described herein. All comments received are summarized as follows:

EPA

EPA requested clarification as to why Chesapeake Bay nutrient monitoring is not required. The Benner Spring State Fish Hatchery, through several years of historical sampling for total nitrogen (TN) and total phosphorus (TP), has proven they are an insignificant industrial Chesapeake Bay discharger as they have shown effluent levels of less than 75 lbs/day of TN and less than 25 lbs/day of TP. Therefore, the Department believes there is no reasonable potential for the facility to exceed these thresholds and no additional monitoring will be required at this time.

PFBC

Comment: A 1/30/25 email from PFBC provides an updated 5-year discharge flow of 3714 gpm, or 5.35 MGD.

Response: The Department acknowledges that an outdated long term average flow to analyze the pollutants during the draft period. The Department will re-evaluate effluent limits in this redraft permit using 5.35 MGD discharge flow rate.

Comment: *"On the title page, it reads, "facility known as Benner Springs Fsh Research Station." The Commission requests updating the facility to be known as "Benner Spring (no s) State Fish Hatchery." This recommendation will keep all facility names consistent throughout our agencies."*

Response: The facility will be properly labeled in the redraft.

Approve	Return	Deny	Signatures	Date
X			*Chad A. Fabian* Chad A. Fabian / Project Manager	3/9/2025
X			*Nicholas W. Hartranft, P.E.* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	3/10/2025
X			*Thomas M. Randis* Thomas M. Randis / Program Manager	3/11/2025

Comment: "*In Part A, Section I.A. on page 2, the Commission recommends that the "Average Monthly Concentration" for Biochemical Oxygen Demand (BOD5) Effluent Net should be 5.0 mg/L, instead of 5 mg/L for clarification.*"

Response: The Department will correct this value to 5.0 in the upcoming draft.

Comment: *"In Part A, Section I.A. on page 2, the Commission recommends that the "Weekly Average Mass Units" for Total Suspended Solids (TSS) be changed to "Report", instead of "Report Daily Max". We also recommend that the "Weekly Average Concentration" for TSS be changed to "Report" instead of "Report Daily Max". This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."*

Response: In accordance with Table 6-5 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)" monthly concentrations limits are to be average monthly, daily maximum, and instantons maximum. Also, per the respective guidance, mass limitations should be average monthly and daily maximum values. The redrafted permit will have effluent limitations in accordance with the guidance. The proposed limits can be found later in the report.

Comment: *"In Part A, Section I.A. on page 3, the Commission recommends that the line for Total Suspended Solids (Total Load, lbs) "Report Total Annual" be removed from the NPDES permit. It appears to be a duplicate line."*

Response: The referenced limitation is meant to remain. This row was meant to have the total annual load limitation of 36,110 pounds per year. The annual TSS load limitation is not meant to be a "Effluent Net" limitation. Therefore, the row above it referencing an annual effluent net will be removed.

Comment: *"In Part A, Section I.A. on page 3, the Commission recommends that the required sample type for Formaldehyde be changed to 3 Grabs/24 Hours. This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."*

Response: The Department will grant this request.

Comment: *"In Part A, Section I.B. on page 4, the Commission recommends that both of the Daily Maximum Effluent Limitations be changed to Weekly Averages for all parameters. This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."*

Response: Similar to an above response, the effluent limitations will be in accordance with Table 6-5 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)." Per the guidance, weekly averages do not apply to industrial wastewater facilities. All weekly averages will be changed to daily maximum limitations.

Comment: *"In Part A, Section I.B. on page 4, the Commission recommends Carbonaceous Biochemical Oxygen Demand (CBOD5) Effluent Net be changed to Biochemical Oxygen Demand (BOD5) Effluent Net. The Commission also recommends Carbonaceous Biochemical Oxygen Demand (CBOD5) be changed to Biochemical Oxygen Demand (BOD5) Industrial Influent*. This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."

Response: The Department appreciates the comment and will grant this request. BOD_5 limitations are consistent with the Department's general permit (PAG-11) for CAAP (Concentrated Aquatic Animal Production) facilities.

Comment: *"In Part A, Section I.B. on page 4, the Commission recommends removing numerical limitations from the Carbonaceous Biochemical Oxygen Demand (CBOD5) line and the Total Suspended Solids line, as numerical limitations are already present in the Effluent Net lines for both parameters. This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."*

Response: This was a typographical error by the Department. The numerical values will be removed and replaced with "report."

Comment: *"In Part A, Section I.B. on page 4, the Commission recommends adding a line for Total Suspended Solids Industrial Influent for Outfall 002. This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."*

Response: This was an error by the Department. The draft permit will contain influent monitoring for TSS.

Comment: *"In Part A, Section I.B. on page 5, the Commission recommends that both Daily Maximum Effluent Limitations be changed to Weekly Averages. This recommendation is in line with other Commission hatcheries that have similar Concentrated Aquatic Animal Production (CAAP) limitations."*

Response: Effluent limitations will be in accordance with Table 6-5 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)." Per the guidance, weekly averages do not apply to industrial wastewater facilities. All weekly averages will be changed to daily maximum limitations.

Comment: "In Part A, Supplemental Information on page 6, the Commission recommends that the effluent discharge rate for Outfall 001 be increased to 5.99 MGD. This is a 1.08 MGD increase from the 4.91 MGD originally used for effluent limitations. We recommend this increase in effluent flow since the facility is no longer able to recirculate water due to an aquatic invasive species contamination. A new well, free of contamination was also drilled to help create more fresh water. This increase in flow will help account for what is being lost by no longer recirculating hatchery water."

Response: The most up to date long term average of 5.35 MGD was provided by the PFBC in an email on 1/30/2025. The Department will use 5.35 MGD to evaluate effluent limitations in this redraft permit.

Comment: *"In Part A, Section III.E. on page 16, the Commission requests changing the CAAP Individual Permit fee from $1,500 to $0 because the Commission is exempt from these fees."*

Response: This will be corrected in the redraft permit.

Comment: *"In Part C, Section II.A.1. on page 21, the Commission requests that the footnotes on Hydrogen Peroxide and Slimy Grimy in the Therapeutic Chemical Usage Chart be added or the footnote numbers removed from those chemicals if no footnotes apply."*

Response: The footnotes will be removed.

Chemical Additives

The following is a summary of the proposed therapeutic chemicals and their allowable usage rate with the updated discharge flow of 5.35 MGD:

Therapeutic Chemical	Proposed Usage Rate	Allowable Usage Rate (lbs/day)
Florfenicol	0.045 lbs/day, 31 days per year	178
Diquat Dibromide	1.5 gallons/day, 21 days per year	0.84*
Chloramine T	30 lbs/day	39
Hydrogen Peroxide (1)	30 gallons/day	514*
Terramycin TM200	3.6 lbs/day	112
Lysol Ammonium	3.5 gallons/day	0.078*
Romet TC	2.6 lbs/day	46
Sodium Chloride (2)	500 lbs/day, 50 days per year	668
Slimy Grimy	4 lbs/day, 35 days/yr	25.3

*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 approximately 89 miles downstream on the West Branch of the Susquehanna River.

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 0.95 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 existing limits for BOD5 and TSS that are less than 25 mg/l and 30 mg/l, respectively.

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Proposed 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. Daily Maximum limits were established using multiplier of 2.0, while Instantaneous Maximum (IMAX) limits are determined using multipliers of 2.5 (toxics) and 2.0 (TSS and BOD) 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: Permit Effective Date through Permit 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 Daily Min	XXX	9.0	XXX	1/week	Grab
DO	XXX	XXX	6.0 Daily Min	XXX	XXX	XXX	1/week	Grab
BOD5 Effluent Net	223	446	XXX	5.0	10.0	XXX	1/week	Calculation
BOD5 Industrial Influent	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
BOD5	XXX	XXX	XXX	Report	Report	10	1/week	24-Hr Composite
TSS Effluent Net	200	400	XXX	4.5	9.0	XXX	1/week	Calculation
TSS Industrial Influent	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
TSS	XXX	XXX	XXX	Report	Report	9	1/week	24-Hr Composite
Total Suspended Solids (lbs) Effluent Net	XXX	36110 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia	45	90	XXX	1.0	2.0	2.5	2/month	24-Hr Composite
Dissolved Phosphorus	13	26	XXX	0.3	0.6	7.5	2/month	24-Hr Composite
Formaldehyde	42	84	XXX	0.95	1.9	2.3	2/month	3 Grabs/24 Hours
PFAS (PFOS, PFOA, PFBS, HFPO-DA)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	24-Hr Composite
Temperature ºF	XXX	XXX	XXX	XXX	Report	XXX	Continuous	I-S

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Outfall 002, (from Permit Effective Date through Permit 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 Daily Min	XXX	9.0	XXX	1/week	Grab
DO	XXX	XXX	6.0 Daily Min	XXX	XXX	XXX	1/week	Grab
BOD5 Effluent Net	8	16	XXX	5.0	10.0	XXX	1/week	Calculation
BOD5 Industrial Influent	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
BOD5	XXX	XXX	XXX	Report	Report	10	1/week	24-Hr Composite
TSS Effluent Net	7	14	XXX	4.5	9.0	XXX	1/week	Calculation
TSS Industrial Influent	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
TSS	XXX	XXX	XXX	Report	Report	9	1/week	24-Hr Composite
Ammonia	1.6	3.2	XXX	1.0	2.0	2.5	2/month	24-Hr Composite
Dissolved Phosphorus	0.5	1.0	XXX	0.3	0.6	7.5	2/month	24-Hr Composite
Formaldehyde	1.5	3.0	XXX	0.95	1.9	2.3	2/month	3 Grabs/24 Hours
PFAS (PFOS, PFOA, PFBS, HFPO-DA)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
Temperature ºF	XXX	XXX	XXX	XXX	Report	XXX	Continuous	I-S

Mass limitations were calculated based on a design flow of 0.1944 MGD for this seasonal intermittent discharge from warm water

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All the above effluent concentration limitations (mg/l) are the same as the first draft permit. Changes were made to the mass loading limitations based on the upgraded design discharge flow of 5.35 MGD. Monitoring frequencies and sample types are the same as the first draft permit, with the addition of temperature monitoring. The existing permit erroneously used a multiplier of 2.5 for instantaneous maximum limitations for TSS and CBOD5. The correct multiplier should be 2.0. A chemical additive Part C condition will contain the maximum daily usage rates for the proposed therapeutic chemicals at the new discharge flow of 5.35 MGD. Included in this draft are the PFAS monitoring and reporting requirements.

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


TMS Redraft.pdf


EPA Comments.pdf


Benner Spring NPDES Draft Comme