Pennsylvania Department of Environmental Protection

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0010561**
Facility Type	**Industrial**	APS ID	**987806**
Major / Minor	**Minor**	Authorization ID	**1263886**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Pennsylvania Fish And Boat Commission**	Facility Name	**Pleasant Gap State Fish Hatchery**
Applicant Address	1735 Shiloh Road	Facility Address	450 Robinson Lane
	State College, PA 16801-8495		Bellefonte, PA 16823-7437
Applicant Contact	Mindy Mcclenahan	Facility Contact	
Applicant Phone	(814) 353-2229	Facility Phone	
Client ID	135455	Site ID	257985
SIC Code	0921	Municipality	Benner Township
SIC Description	Agriculture - Fish Hatcheries And Preserves	County	Centre
Date Application Received	February 28, 2019	EPA Waived?	Yes
Date Application Accepted	February 28, 2019	If No, Reason	
Purpose of Application	Renewal of existing NPDES Permit		

Summary of Review

The above applicant has submitted a renewal application to renew their NPDES permit for one existing outfall (001) at the existing Pleasant Gap State Fish Hatchery to Logan Branch. The hatchery mainly propagates brook, brown, rainbow, and golden rainbow trout. The trout are raised from eggs to adults. They are fed a dry pellet diet and are stocked into various water bodies across the state. The maximum peak fish biomass occurs during February and March. Outfall 001 is treated via a clarifier, earthen lagoon, and micro screens prior to being discharged.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Chad A. Fabian* Chad A. Fabian / Project Manager	June 17, 2025
X		*Nicholas W. Hartranft, P.E.* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	June 18, 2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	2.75
Latitude	40° 52’ 23.04”	Longitude	77° 45’ 36.51”
Quad Name	State College	Quad Code	1223
Wastewater Description:	001: Fish hatchery wastewater		
Receiving Waters	Logan Branch	Stream Code	22997
NHD Com ID	67179340	RMI	3.85
Drainage Area	9.3 mi^2	Yield (cfs/mi^2)	0.26
Q_{7-10} Flow (cfs)	2.48	Q_{7-10} Basis	Previous permit
Elevation (ft)	900	Slope (ft/ft)	n/a
Watershed No.	9-C	Chapter 93 Class.	HQ-CWF
Existing Use	HQ-CWF	Existing Use Qualifier	n/a
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, PCB, Organic Enrichment/Low D.O.		
Source(s) of Impairment	Industrial Point Source, Source Unknown		
TMDL Status	Pending	Name	n/a
Nearest Downstream Public Water Supply Intake	Near Milton, PA on West Branch Susquehanna River approximately 90 miles downstream		

Changes Since Last Permit Issuance: Updated long term average flow.

Compliance History	
Summary of eDMRs:	A review of the past 12 months of eDMR data shows no effluent violations.
Summary of Inspections:	The most recent inspection by the Department in WMS was performed in October of 2024. An effluent violation for pH was noted from July of 2023. No other violations were noted.

Water Quality-Based Limitations

The facility uses therapeutic chemicals to treat fish for various diseases. In this renewal process, the Department has evaluated the use of these therapeutic chemicals using the same process that the Department evaluates the use of chemical additives. Using Material Safety Data Sheets (MSDS) for each chemical, aquatic life effect levels for each chemical were input into the Department’s Toxics Management Spreadsheet (TMS). The resulting Water Quality Based Effluent Limit (WQBEL) were used in conjunction with annual average permitted flow (2.62 MGD) to back calculate the allowable usage of each chemical through a mass balance equation (WQBEL in mg/l X 2.62 MGD X 8.34 lbs/gal) calculated by the TMS as a maximum daily usage value. All of the chemical additives’ aquatic life values and the TMS are attached.

The following is a summary of the proposed therapeutic chemicals and their allowable usage rate:

Therapeutic Chemical	Allowable Usage Rate (lbs/day)
Terramycin 200	62.1
Romet TC	36.0
Chloramine-T (Halamid)	41.2
35% Hydrogen Peroxide(1)	400
Lysol Professional Brand (No Rinse Sanitizer)	0.061
Florfenicol	139
Sodium Chloride	234
Diaquat Dibromide	0.66
Slimy Grimy	19.8
Sodium Chloride	523

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

(1) The TMS shows a maximum daily usage rate of 4.0 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 0.57 pounds per day to be discharged.

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 0.59 mg/l are protective of water quality standards. The facility uses Formalin as a therapeutic chemical to treat fish. Since the main ingredient of formalin is formaldehyde, for which an effluent limit is already established, no usage rate is necessary. No other toxics are expected to be introduced at the hatchery.

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD (CBOD5), and ammonia nitrogen (NH3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes. In the NH3-N module, the model simulates the mixing and degradation of NH3-N in the stream and compares calculated instream NH3-N concentrations to NH3-N water quality criteria. In the DO module, the model simulates the mixing and consumption of DO in the stream due to the degradation of CBOD5 and NH3-N, and compares calculated instream DO concentrations to DO water quality criteria. The previous WQM modeling output shows that the existing technology limitations are protective of water quality standards. Since there have been no changes to the receiving stream or outfall since the previous modeling, the Department SOP does not require additional modeling.

The existing water quality limitations for pH are established based on 25 PA Code §95.2.

The existing permit has an allowable annual total suspended solids (TSS) load of 18,950 pounds. The need for the existing annual TSS load is due to the segment of Spring Creek being on the *List 4b of the 2008 Pennsylvania Integrated Water Quality Monitoring and Assessment Report*. The justification for this load can be found in Ron Hughey's 10/17/2005 memo, which is attached hereto. In summary, the limitation is a water quality based effluent limitation established to address the impairment below the hatchery outfall. On 4/9/2013, David I. Rebuck (DEP Water Pollution Biologist 2) performed another aquatic biological investigation on Logan Branch above and below the outfall. A copy of a 5/23/2014 email from Mr. Rebuck summarizing the results from the investigation is attached. Both the upstream and downstream sampling sites scored above the impairment threshold. Therefore, it appears the hatchery is no longer impairing the stream. The Department believes the installation of the microscreen treatment system and implementation of the total suspended solids loading threshold established in the existing permit have contributed to the water quality improvement. Therefore, it is recommend that the existing annual TSS load remain in the permit as an effluent net limitation.

Technology-Based Limitations

The existing permit implements technology based effluent limitations for TSS, $CBOD_5$, Phosphorus, and NH_3-N based on previous statistical analysis of discharge monitoring report (DMR) data for the hatchery and represent treatment levels achievable by the enhanced operation and maintenance practices at the facility.

A technology-based standard of 6.0 mg/l minimum for dissolved oxygen (DO) has been established in the Department's recently developed general permit (PAG-11) for CAAP (Concentrated Aquatic Animal Production) facilities. The existing NPDES permit does not contain a DO limitation. However, it is recommended that the aforementioned technology-based standard be implemented at this facility.

CBOD5 effluent limitations will be converted to BOD5, to remain consistent with other hatcheries and the Department's PAG-011 for Aquaculture facilities. Similarly, to remain consistent with other hatcheries and the PAG011, effluent net limitations for TSS and BOD5 have been implemented.

Chesapeake Bay Requirements

It should also be noted that the facility is classified as a non-significant Chesapeake Bay contributor since they discharge less than 75 pounds per day of total nitrogen and less than 25 pounds per day of total phosphorus. Therefore, no nutrient monitoring will be required.

Best Professional Judgement (BPJ) Limitations

Monitoring and reporting of temperature is being proposed to remain consistent with other PFBC hatcheries.

Compliance History

DMR Data for Outfall 001 (from May 1, 2024 to April 30, 2025)

Parameter	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24
Flow (MGD) Average Monthly	3.198	3.34	3.3697	3.3012	3.3911	3.2023	3.0154	3.2744	3.1624	2.482	2.0754	2.3244
Flow (MGD) Daily Maximum	3.488	3.5296	3.4517	3.4163	3.6405	3.4256	3.2328	3.4704	3.3019	2.7893	2.4023	2.5431
pH (S.U.) Minimum	7.7	7.6	7.8	7.8	7.5	7.5	7.5	7.4	7.4	7.5	7.5	7.4
pH (S.U.) Maximum	8.1	8.5	8.0	8.0	8.2	7.8	8.0	7.9	7.6	7.8	8.4	8.0
DO (mg/L) Minimum	9.9	10.6	8.9	11.2	9.3	8.4	8.3	7.6	7.0	7.5	7.0	7.3
CBOD5 (lbs/day) Average Monthly	< 80	< 87	98	< 83	< 90	< 81	< 76	< 83	< 78	< 61	< 52	< 56
CBOD5 (lbs/day) Daily Maximum	< 87	103	123	86	107	< 86	< 78	< 87	< 81	< 69	< 60	< 63
CBOD5 (mg/L) Average Monthly	< 3.0	< 3.1	3.5	< 3.0	< 3.2	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
CBOD5 (mg/L) Daily Maximum	< 3.0	3.5	4.3	3.1	3.7	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
TSS (lbs/day) Average Monthly	80	78	56	55	47	48	64	51	42	29	28	20
TSS (lbs/day) Daily Maximum	163	102	72	76	64	80	136	75	54	48	40	25
TSS (mg/L) Average Monthly	3.0	2.8	2.0	2.0	1.6	1.8	2.5	1.9	1.6	1.4	1.6	1.1
TSS (mg/L) Daily Maximum	5.6	3.8	2.6	2.8	2.1	2.8	5.2	2.6	2.0	2.5	2.0	1.3
Ammonia (lbs/day) Average Monthly	14	19	27	17	21	10	12	4	9	9	10	2
Ammonia (lbs/day) Daily Maximum	18	23	32	24	31	10	14	5	16	11	11	6
Ammonia (mg/L) Average Monthly	0.5	0.7	1.0	0.6	0.8	0.3	0.5	0.2	0.4	0.4	0.6	0.1
Ammonia (mg/L) Daily Maximum	0.7	0.8	1.1	0.9	1.1	0.3	0.6	0.2	0.6	0.6	0.7	0.3
Dissolved Phosphorus (lbs/day) Average Monthly	4	6	7	5	5	3	2	2	2	2	2	2

Dissolved Phosphorus (lbs/day) Daily Maximum	5	7	8	6	7	3	3	2	2	2	2	2
Dissolved Phosphorus (mg/L) Average Monthly	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Dissolved Phosphorus (mg/L) Daily Maximum	0.2	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Formaldehyde (lbs/day) Average Monthly	GG	GG	GG	GG	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.4	GG	< 2
Formaldehyde (lbs/day) Daily Maximum	GG	GG	GG	GG	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.4	GG	< 2
Formaldehyde (mg/L) Average Monthly	GG	GG	GG	GG	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	GG	< 0.10
Formaldehyde (mg/L) Daily Maximum	GG	GG	GG	GG	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	GG	< 0.1

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. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), 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-Composite
Temperature (ºF)	XXX	XXX	XXX	Report Wkly Avg	Report	XXX	1/week	I-S
BOD5 Effluent Net	192	384	XXX	5.0	10.0	XXX	1/week	24-Hr Composite
BOD5 Industrial Influent	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
BOD5	192	384	XXX	5.0	10.0	10	1/week	24-Hr Composite
TSS Effluent Net	172	245	XXX	4.5	9.0	9	1/week	24-Hr Composite
TSS	172	345	XXX	4.5	9.0	11.5	1/week	24-Hr Composite
TSS Industrial Influent	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Total Suspended Solids (lbs) Effluent Net	XXX	27950 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia	38	76	XXX	1.0	2.0	2.5	2/month	24-Hr Composite
Dissolved Phosphorus	11	23	XXX	0.3	0.6	0.75	2/month	24-Hr Composite

Outfall 001 , Continued (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		
Formaldehyde	22	42	XXX	0.59	1.1	1.4	2/month	See Permit
PFOA	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOS	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFBS	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
HFPO-DA	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Compliance Sampling Location: 001

Other Comments:

Per 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) and in accordance with the Department's PAG-11 for NPDES Permits relating to Aquaculture, the Department has established Daily Maximum and Instantaneous maximum concentration and load limits using multipliers of 2.0 and 2.5 respectively. Per the respective guidance, BOD5 and TSS instantaneous maximum limitations were calculated using a multiplier of 2.0 . Also, per Table 6-4 relating to process wastewater in the aforementioned guidance, the Department has established 1/week monitoring for BOD5, total suspended solids, ammonia-nitrogen, and dissolved phosphorus. All other monitoring frequencies remain the same as the existing permit.

PFAS monitoring is in accordance with the Department's SOP for PFAS monitoring.

A WMS opens violations report shows that no open violations exist at the facility. Based on the above review, it is recommended that the permit be drafted as described above.