pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0032492**
Facility Type	**Municipal**	APS ID	**1054027**
Major / Minor	**Minor**	Authorization ID	**1380418**

Applicant and Facility Information

Applicant Name	**PA DCNR Bald Eagle State Park**	Facility Name	**Bald Eagle State Park**
Applicant Address	149 Main Park Road	Facility Address	State Park Road
	Howard, PA 16841-3508		Howard, PA 16841-9707
Applicant Contact	Tara Devore	Facility Contact	Brian Wolfgang
Applicant Phone	(814) 625-2775	Facility Phone	814-625-2775
Client ID	51146	Site ID	263129
Ch 94 Load Status	Not Overloaded	Municipality	Liberty Township
Connection Status	No Limitations	County	Centre
Date Application Received	January 3, 2022	EPA Waived?	No
Date Application Accepted	January 18, 2022	If No, Reason	Significant CB Discharge

Purpose of Application: Renewal of existing NPDES permit.

Summary of Review

The above permittee has submitted an NPDES renewal application for their existing discharge to Bald Eagle Creek. The discharge is from a 0.45 MGD sewage treatment plant that serves Bald Eagle State Park, Village of Blanchard, and Howard Borough. The facility does not accept any hauled in wastes nor does it have any industrial users.

The treatment plant is a dual train extended aeration treatment plant. Treatment consists of a comminutor, bar screen, equalization tank, 2 aeration tanks, 2 digesters, 2 sludge holding tanks, a liquid chlorine feed system, 2 chlorine contact tanks, 3 sludge drying beds, and an outfall. Aluminum sulfate is utilized for phosphorus removal. Caustic soda is utilized as needed for pH control.

Unless otherwise noted, all applicable Department Standard Operating Procedures (SOPs) were used in developing the following fact sheet. It is recommended the permit be drafted and published in the PA Bulletin for the required 30-day comment period.

Sludge use and disposal description and location(s): Wayne Township Landfill (Clinton County)

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 21, 2022
X		*Nicholas W. Hartranft, P.E.* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	June 22, 2022

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.45
Latitude	41º 3' 0.04"	Longitude	-77º 36' 26.98"
Quad Name	Howard	Quad Code	4-13.3
Wastewater Description:	Sewage Effluent		
Receiving Waters	Bald Eagle Creek	Stream Code	22412
NHD Com ID	67177014	RMI	15
Drainage Area	339	Yield (cfs/mi^2)	0.3
Q_{7-10} Flow (cfs)	102	Q_{7-10} Basis	USGS Stream Gage 01547500
Elevation (ft)	600	Slope (ft/ft)	n/a
Watershed No.	9-C	Chapter 93 Class.	WWF
Existing Use	WWF	Existing Use Qualifier	n/a
Exceptions to Use	None	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Alterations, Organic Enrichment/Low D.O., Thermal Modifications,		
Source(s) of Impairment	Upstream Impoundment		
TMDL Status	None	Name	n/a
Nearest Downstream Public Water Supply Intake	PA American Water near Milton, PA approximately 50 river miles downstream on the W. Br. Susquehanna River.		

Changes Since Last Permit Issuance: None

Other Comments: The impairment listed is from the results of the dam outlet from Foster Joseph Sayers Lake, located just upstream of the discharge. This outfall is not related to the impairment.

Compliance History	
Summary of eDMRs:	The facility utilizes the Department's eDMR system for reporting effluent results. No effluent violations or exceedances have occurred in the past 12 months.
Summary of Inspections:	The most recent inspection by the Department was performed on 4/1/2022. The inspection noted violations for not meeting the minimum sampling frequency of 2/week for parameters total phosphorus, ammonia, TKN, nitrate-nitrite and total nitrogen during a 2 week stretch in February of 2022. The aforementioned violations will not influence the draft permit process to renew the existing NPDES permit.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .45
Latitude 41º 3' 0.70" **Longitude** -77º 36' 27.43"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The above limitations currently are implemented in the existing NPDES permit.

Water Quality-Based Limitations

The Department's WQM 7.0 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: the mixing and degradation of NH3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of CBOD5 and NH3-N. WQM 7.0 modeling was previously performed (see attached) for the discharge. The results of this modeling show that the existing limitations are protective of water quality standards. Per the Department's SOP for reissuance of NPDE Permits, additional modeling is not required since there has been no change to the discharge quality or the receiving stream.

The Department's Toxic Management Spreedsheet (TMS) was used to evaluate the toxics that were sampled and included in the effluent testing section of the NPDES renewal application. The TMS showed that no effluent limitations or monitoring is required. The TMS has been attached.

The chlorine spreadsheet shows that the technology standard of 0.5 mg/l monthly average limitation is protective of water quality. See attached model for results.

Emerging Pollutants (TDS, Sulfate, Chloride, Bromide, 1,4-Dioxane)

As a result of direction from the Environmental Quality Board and EPA, the Department has begun increased monitoring for the emerging pollutants of TDS, Sulfate, Chloride, Bromide, 1,4-Dioxane. See the attached email dated 1/23/2014 from Sean Furjanic as reference.

Where the TDS concentration from a discharge exceeds 1,000 mg/l or loading exceeds 20,000 lbs/day and the flow exceeds 0.1 MGD the permit should typically include monitoring for TDS, Sulfate, Chloride and Bromide. Therefore, because the application sampling showed the TDS concentration in Outfall 001 to be less than 1,000 mg/l (472 mg/l), the permit will not include quarterly monitoring for TDS, as well as Sulfate and Chloride. Since sampling for Bromide was

<0.2 mg/l, it will not be required to be monitored in the permit. Additionally, since there is not a known source of 1,4-Dioxane present, it also will not be required to be monitored in the permit.

Chesapeake Bay Nutrient Requirements

A portion of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the Water Pollution Control Act, 33 U.S.C. §1313(d). Total Nitrogen and Total Phosphorus cap loads have been established for significant dischargers in Pennsylvania in order to reduce the total nutrient load to the Bay and meet State of Maryland Water Quality Standards. The applicant is considered a Phase 3 Significant Chesapeake Bay discharger. Nutrient cap loadings have previously been established for this facility pursuant to the Phase III Watershed Implementation Plan II (WIP II).

These respective annual nutrient loads are:

Total Nitrogen	Total Phosphorus
8219 lbs per year	1096 lbs per year

Best Professional Judgment (BPJ) Limitations

None

Anti-Backsliding

This draft permit does not propose to relax any of the existing limitations in the permit.

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" (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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Max	XXX	1/day	Grab
DO	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	94	150	XXX	25.0	40.0	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	113	169	XXX	30.0	45.0	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	Grab
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Nitrate-Nitrite (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Ammonia	Report	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Ammonia (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
TKN (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/week	8-Hr Composite
Total Phosphorus (lbs) Effluent Net	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus (lbs)	Report Total Mo	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Compliance Sampling Location: 001

Other Comments: All of the above effluent limitations are the same as in the existing NPDES permit, with the except of E. Coli. E. Coli has been added in accordance to the Department's Standard Operating Procedures (SOP) for establishing effluent limitations for sewage discharges (dated March 22, 2021).

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy.

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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Total Nitrogen (lbs) Effluent Net	XXX	8219 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Ammonia (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs) Effluent Net	XXX	1096 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: 001

Other Comments: It is recommended the permit be drafted as detailed above.