pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0228923**
Facility Type	**Non-Municipal**	APS ID	**1002348**
Major / Minor	**Minor**	Authorization ID	**1289540**

Applicant and Facility Information

Applicant Name	**Pine Cradle Lake Campgrounds**	Facility Name	**Pine Cradle Lake Campground**
Applicant Address	220 Shoemaker Road	Facility Address	220 Shoemaker Road
	Ulster, PA 18850-8343		Ulster, PA 18850-8343
Applicant Contact	Roger Druck, President	Facility Contact	Roger Druck, President
Applicant Phone	(570) 247-2424	Facility Phone	(570) 247-2424
Client ID	41640	Site ID	259212
Ch 94 Load Status	Not Overloaded	Municipality	Rome Township
Connection Status	No Limitations	County	Bradford
Date Application Received	September 20, 2019	EPA Waived?	Yes
Date Application Accepted	September 25, 2019	If No, Reason	

Purpose of Application: Renewal of a NPDES Permit

Summary of Review

The subject facility is a campground operating from approximately May to October.

A map of the discharge location is attached.

The facility had previously been permitted as a Small Flow Treatment Facility which is facilities up to 0.002 MGD. However, because the design flow is 0.005 MGD it will now be permitted as a "minor sewage treatment facility less than 50,000 gpd" upon issuance of this renewal. This change will result in the requirement for a certified operator which the facility already has and increased permit and annual fees.

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		*Keith C. Allison* Keith C. Allison / Project Manager	June 22, 2020
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	June 23, 2020

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.005
Latitude	41º 53' 25.03"	Longitude	-76º 21' 7.76"
Quad Name	Windham, PA	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Parks Creek (CWF)	Stream Code	30155
NHD Com ID	66394281	RMI	0.407
Drainage Area	0.14 mi^2 @ Discharge Point 9.17 mi^2 @ Parks Creek	Yield (cfs/mi^2)	0.00720
Q_{7-10} Flow (cfs)	0.066 @ Parks Creek	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1300 @ Discharge Point 1020 @ Parks Creek	Slope (ft/ft)	Undetermined
Watershed No.	4-D	Chapter 93 Class.	CWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	Danville Municipal Water Authority		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	6,500,000
PWS RMI	122.5	Distance from Outfall (mi)	Approx. 138

Changes Since Last Permit Issuance: The above discharge and steam characteristics are mostly from the previous review and remain adequate.

Other Comments: The discharge is to a swale draining to Parks Creek which is downstream from the outlet of the Pine Cradle Lake impoundment.

No downstream water supply is expected to be affected by the discharge with the limitations and monitoring proposed.

Treatment Facility Summary

Treatment Facility Name: Pine Cradle Lake Campground STP

WQM Permit No.	Issuance Date
0805401	June 8, 2005

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Septic Tank Sand Filter	Chlorine With Dechlorination	0.005

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.005	15.9	Not Overloaded		

Changes Since Last Permit Issuance: None

Other Comments: The treatment process, as approved under WQM permit No. 0805401, consists of ten 1,000-gallon septic tanks, three 1,250-gallon septic tanks, two 4,500-gallon aerated equalization tanks, one pump tank, one 30’ x 58’ free access sand filter, a tablet chlorinator, 2,500-gallon chlorine contact tank and, tablet dechlorination.

Compliance History

DMR Data for Outfall 001 (from April 1, 2019 to April 30, 2020)

Parameter	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19
Flow (MGD) Average Monthly		0.00102	0.00118	0.00206	0.00194	0.00161	0.00088	
pH (S.U.) Minimum		7.24	7.24	7.09	7.6	7.2	7.65	
pH (S.U.) Maximum		7.6	7.77	7.62	8.42	7.99	8.01	
DO (mg/L) Minimum		5.65	7.52	6.98	6.55	5.34	4.33	
TRC (mg/L) Average Monthly		0.04	0.05	0.05	0.04	0.04	0.03	
TRC (mg/L) Instantaneous Maximum		0.05	0.05	0.05	0.05	0.05	0.05	
CBOD5 (mg/L) Average Monthly		< 3	< 3	3.06	16.65	4.37	9.05	
CBOD5 (mg/L) Instantaneous Maximum		< 3	< 3	3.12	38	5.02	15.1	
TSS (mg/L) Average Monthly		8.8	18	11	14	7.6	2.8	
TSS (mg/L) Instantaneous Maximum		8.8	33	12	15.2	8.4	4.8	
Fecal Coliform (No./100 ml) Geometric Mean		< 1	3	93	186	6	3.46	
Fecal Coliform (No./100 ml) Instantaneous Maximum		< 1	10	1379.2	11199	31	11	
Total Nitrogen (lbs/day) Average Monthly		0.32996 for 2019						
Total Nitrogen (mg/L) Average Monthly		28.67 for 2019						
Ammonia (mg/L) Average Monthly		1	50.73	5.384	46.88	19.03	1.68	
Total Phosphorus (lbs/day) Average Monthly		0.05294 for 2019						
Total Phosphorus (mg/L) Average Monthly		4.6 for 2019						

Compliance History, Cont'd

Effluent Violations for Outfall 001, from: January 1, 2019 To: November 30, 2019

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	07/31/19	Avg Mo	16.65	mg/L	10	mg/L
CBOD5	07/31/19	Avg Mo	16.65	mg/L	10	mg/L
CBOD5	07/31/19	IMAX	38	mg/L	20	mg/L
CBOD5	07/31/19	IMAX	38	mg/L	20	mg/L
Fecal Coliform	07/31/19	Geo Mean	5601	No./100 ml	200	No./100 ml
Fecal Coliform	07/31/19	IMAX	11199	No./100 ml	1000	No./100 ml
Fecal Coliform	07/31/19	IMAX	11199	No./100 ml	1000	No./100 ml
Fecal Coliform	08/31/19	IMAX	1379.2	No./100 ml	1000	No./100 ml

Compliance History, Cont'd

Summary of Inspections:	The facility has been inspected periodically over the past permit term. Most recently is it was inspected on July 30, 2019 by Stephen Puzio, WQS. An administrative inspection occurred March 19, 2020. These inspections noted no violations.
Other Comments:	A WMS query found no open violations in eFACTS for Pine Cradle Lake Campgrounds.

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/week	Weir
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.05	1/day	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	20	XXX	40	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/year	Grab
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/year	Grab

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.005
Latitude 41º 53' 25.00" **Longitude** -76º 21' 8.00"
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 limits are applicable. However, the discharge has received more stringent limitations for $CBOD_5$, TSS and TRC due to the discharge to a swale as further discussed below.

Water Quality-Based Limitations

Discharge to Dry/Intermittent Stream

Consistent with the Department's Guidance "Implementation Guidance for Evaluating Wastewater Discharges to Drainage Ditches and Swales" (Doc. ID 391-2000-014, April 2008) the facility has existing limitations for $CBOD_5$, TSS, and TRC. Due to the facility being existing and because no impacts have been noted in the swale or ultimate receiving stream the Advanced Treatment Requirements listed in that guidance will not be required of the discharge at this time. These include more stringent limitations for TSS, Total Nitrogen, Dissolved Oxygen and Phosphorus as listed below.

Advanced Treatment Requirements for discharges to intermittent and dry streams

Parameter	Limitation
TSS	10 mg/L
Total Nitrogen	5 mg/L
Dissolved Oxygen	Minimum 6 mg/L
Phosphorus	0.5 mg/L

The existing limitation for TRC is at 0.05 mg/L as an Instantaneous Maximum. This limitation is adequate to protect the swale and Parks Creek. The significant slope in the unnamed tributary should adequately help to dissipate the minimal chlorine residual.

DO, CBOD5 and NH3-N

The Department uses the WQM7.0 model to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. No WQM7.0 modeling was performed at this time due to (a) the existing limitations which are more stringent than secondary treatment and (b) the significant slope in the unnamed tributary to Parks Creek which would create adequate reaeration in the channel. The existing DO and ammonia monitoring will continue.

Toxics Management
No further "Reasonable Potential Analysis" was conducted to determine additional toxic parameters for this minor treatment facility with no industrial inflows.

Chesapeake Bay/Nutrient Requirements
According to the Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, this facility is an existing Phase 5 Chesapeake Bay sewage discharger that is not expanding, and as such requires no nutrient loading limits. Annual nutrient monitoring was included in the existing permit per the Phase II Watershed Implementation Plan. The Total Nitrogen was found to average 23.6 mg/L and the Total Phosphorus averaged 2.59 mg/L over the past two years. Therefore, because the Total Nitrogen and Total Phosphorus in the effluent has adequately been characterized, no further monitoring for these will be required at this time.

Best Professional Judgment (BPJ) Limitations

Comments: No additional BPJ limitations are necessary beyond the technology and water quality-based limits noted above.

Anti-Backsliding

No proposed limitations were made less stringent consistent with the anti-degradation requirements of the Clean Water Act and 40 CFR 122.44(l).

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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/week	Weir
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.05	1/day	Grab
CBOD5	XXX	XXX	XXX	10	XXX	20	2/month	Grab
TSS	XXX	XXX	XXX	20	XXX	40	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia-nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Compliance Sampling Location: Outfall 001

Other Comments: The above limitations and monitoring are unchanged from the existing permit except for the removal of TN and TP monitoring as noted above.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☒	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits, rev. 8/23/13
☐	Other:

Attachments:

A. Discharge Location Map

Permit No. PA0228923