

Application Type

Renewal

Facility Type

Non-Municipal

Major / Minor

Minor

Application No.

PA0204714

APS ID

1078099

Authorization ID

1421831

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	Henry Ward	Facility Name	New Horizons Foundation Campground
Applicant Address	10 Kindle Lane Levittown, PA 19055-2409	Facility Address	145 New Horizons Drive Clymer, PA 15728-7928
Applicant Contact	Henry Ward	Facility Contact	Henry Ward
Applicant Phone	(267) 971-3329	Facility Phone	(267) 971-3329
Client ID	364910	Site ID	244042
Ch 94 Load Status	Not Overloaded	Municipality	Cherryhill Township
Connection Status	No Limitations	County	Indiana
Date Application Received	<u>December 13, 2022</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted		If No, Reason	
Purpose of Application	NPDES permit renewal for an existing treated sewage discharge.		

Summary of Review

This application is an NPDES permit renewal for an existing campground, but the facility is not currently in operation and is not currently discharging.

Existing treatment facility consists of (WQM 3291404 T-1): Approximately 635 length feet of 8-inch PVC sanitary sewer, a comminutor with bypass bar screen, a 1,250-gallon flow equalization basin, a 3,000-gallon aeration basin, a 670-gallon setting tank, a 1,010-gallon aerobic digestion tank, a 345-gallon chlorine contact tank, and a headwall with outfall.

Sludge use and disposal description and location(s): N/A

The EPA Waiver is in effect.

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		Jordan A. Frey, E.I.T. Jordan A. Frey, E.I.T. / Project Manager	October 3, 2024
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	October 17, 2024

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.0025
Latitude	40° 38' 52.24"	Longitude	-78° 59' 52.67"
Quad Name	Valencia	Quad Code	40079F8
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Penn Run (CWF)	Stream Code	42183
NHD Com ID	123717814	RMI	
Drainage Area	0.89	Yield (cfs/mi ²)	0.1
Q ₇₋₁₀ Flow (cfs)	0.0689	Q ₇₋₁₀ Basis	Default
Elevation (ft)	1402	Slope (ft/ft)	---
Watershed No.	18-D	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION, SILTATION CROP PRODUCTION (CROP LAND OR DRY LAND), CROP PRODUCTION (CROP LAND OR DRY LAND)		
Source(s) of Impairment			
TMDL Status	Final, Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL,Penn Run Watershed
Background/Ambient Data		Data Source	
pH (SU)	7.0	Default	
Temperature (°F)	20	Default	
Hardness (mg/L)	100	Default	
Other:			
Nearest Downstream Public Water Supply Intake	West View Water Authority		
PWS Waters	Ohio River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	25.1

Changes Since Last Permit Issuance: None.

Other Comments: NPDES and WQM permits were transferred to a new owner in 2022.

Treatment Facility Summary				
Treatment Facility Name: New Horizons Campground STP				
WQM Permit No.	Issuance Date			
3291401 T-1	August 5, 2022			
3291401	June 28, 1991			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Extended Aeration With Solids Removal	Hypochlorite	0.0025
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0025	6	Not Overloaded		

Changes Since Last Permit Issuance: Permit transfer in 2022

Other Comments: None.

Development of Effluent Limitations				
Outfall No.	001	Design Flow (MGD)	.0025	
Latitude	40° 38' 53.00"	Longitude	-78° 59' 53.00"	
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)
E. Coli	Report	IMAX		92a.61

Annual E. Coli monitoring has been added in accordance with Chapter 92 requirements.

Comments: Total Residual Chlorine limits were added in the previous permit cycle. Modeling with the Department's TRC spreadsheet yielded similar results to the previous permit cycle, so those limits will be retained.

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Ammonia-Nitrogen	21	Average Monthly	WQM7.0, v 1.0b

Comments: Department policy no longer separates Ammonia-Nitrogen limits between summer and winter, so a year-round limit of 21 mg/l is being applied. WQM7.0, version 1.0b modeling shows a limit of 25mg/l would be protective of the stream but 21mg/l shall be retained due to the Department's Anti-Backsliding policy

Best Professional Judgment (BPJ) Limitations

Comments: A Dissolved Oxygen (DO) minimum of 4.0 mg/l shall continue to be applied.

TMDL for Penn Run and Kiski-Conemaugh Watershed

There is a TMDL for metals in the Kiskiminetas River watershed. The contribution for metals from a sewage plant of this nature is expected to be less than water quality criteria and therefore not contributing to stream impairment. Furthermore, an aggregate waste load allocation was included in the TMDL for these types of facilities. 1/year monitoring is imposed for plants rated between 0.002 mgd up to 0.499 mgd. Monitoring is required to establish data to ensure there are no impacts on the quality of the receiving stream.

Anti-Backsliding

WQM7.0, version 1.0b modeling shows a limit of 25mg/l would be protective of the stream but 21mg/l shall be retained due to the Department's Anti-Backsliding policy

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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.0025	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Measured
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30	XXX	60	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	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	21	XXX	42	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
E. Coli (No./100ml)	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001, after disinfection.

Other Comments: Limits and sampling frequency for Dissolved Oxygen, pH, and TRC are placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

TRC Spreadsheet - New Horizons Campground

TRC EVALUATION						
Input appropriate values in A3:A9 and D3:D9						
Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	1.3.2.iii	WLA_afc = 5.702		1.3.2.iii	WLA_cfc = 5.552	
PENTOXSD TRG	5.1a		LTAMULT_afc = 0.373	5.1c		LTAMULT_cfc = 0.581
PENTOXSD TRG	5.1b			5.1d		LTA_cfc = 3.227
Effluent Limit Calculations						
PENTOXSD TRG	5.1f		AML MULT = 1.231			
PENTOXSD TRG	5.1g		AVG MON LIMIT (mg/l) = 0.500			BAT/BPJ
			INST MAX LIMIT (mg/l) = 1.635			
WLA_afc		$(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...\\...+Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)$				
LTAMULT_afc		$\text{EXP}((0.5*\text{LN}(cvh^2+1))-2.326*\text{LN}(cvh^2+1)^0.5)$				
LTA_afc		wla_afc*LTAMULT_afc				
WLA_cfc		$(.011/e(-k*CFC_tc)) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...\\...+Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)$				
LTAMULT_cfc		$\text{EXP}((0.5*\text{LN}(cvd^2/no_samples+1))-2.326*\text{LN}(cvd^2/no_samples+1)^0.5)$				
LTA_cfc		wla_cfc*LTAMULT_cfc				
AML MULT		$\text{EXP}(2.326*\text{LN}((cvd^2/no_samples+1)^0.5)-0.5*\text{LN}(cvd^2/no_samples+1))$				
AVG MON LIMIT		MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)				
INST MAX LIMIT		1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)				

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>		<u>Stream Code</u>	<u>Stream Name</u>															
18D	44281	Trib 44281 to Penn Run																
NH3-N Acute Allocations																		
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction											
33.000	New Horizons	9.45	50	9.45	50	0	0											
NH3-N Chronic Allocations																		
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction											
33.000	New Horizons	1.9	25	1.9	25	0	0											
Dissolved Oxygen Allocations																		
RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>												
33.00	New Horizons	25	25	25	25	3	3											
RMI	Discharge Name	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)											

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
18D	44281	Trib 44281 to Penn Run		
<u>RMI</u> 33.000	<u>Total Discharge Flow (mgd)</u> 0.002	<u>Analysis Temperature (°C)</u> 20.208	<u>Analysis pH</u> 7.000	
<u>Reach Width (ft)</u> 4.813	<u>Reach Depth (ft)</u> 0.355	<u>Reach WDRatio</u> 13.555	<u>Reach Velocity (fps)</u> 0.054	
<u>Reach CBOD5 (mg/L)</u> 2.96	<u>Reach Kc (1/days)</u> 0.118	<u>Reach NH3-N (mg/L)</u> 1.04	<u>Reach Kn (1/days)</u> 0.711	
<u>Reach DO (mg/L)</u> 8.025	<u>Reach Kr (1/days)</u> 21.047	<u>Kr Equation</u> Owens	<u>Reach DO Goal (mg/L)</u> 6	
<u>Reach Travel Time (days)</u> 3.294	<u>Subreach Results</u>			
	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
	0.329	2.84	0.82	8.21
	0.659	2.74	0.65	8.21
	0.988	2.63	0.52	8.21
	1.318	2.53	0.41	8.21
	1.647	2.43	0.32	8.21
	1.977	2.34	0.26	8.21
	2.306	2.25	0.20	8.21
	2.635	2.16	0.16	8.21
	2.965	2.08	0.13	8.21
	3.294	2.00	0.10	8.21

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Efl. Limit 30-day Ave. (mg/L)	Efl. Limit Maximum (mg/L)	Efl. Limit Minimum (mg/L)
33.000	New Horizons	PA0204714	0.002	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name			RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18D	44281	Trib 44281 to Penn Run			33.000	1402.00	0.89	0.00000	0.00	<input checked="" type="checkbox"/>
Stream Data										
Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Stream Temp (°C)
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00
Q1-10		0.00	0.00	0.000	0.000					
Q30-10		0.00	0.00	0.000	0.000					
Discharge Data										
	Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor		Disc Temp (°C)	Disc pH	
	New Horizons	PA0204714	0.0025	0.0025	0.0000	0.000		25.00	7.00	
Parameter Data										
	Parameter Name		Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)				
	CBOD5		25.00	2.00	0.00	1.50				
	Dissolved Oxygen		3.00	8.24	0.00	0.00				
	NH3-N		25.00	0.00	0.00	0.70				

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name			RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18D	44281	Trib 44281 to Penn Run			30.070	1358.00	7.64	0.00000	0.00	<input checked="" type="checkbox"/>
Stream Data										
Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Stream Temp (°C)
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00
Q1-10		0.00	0.00	0.000	0.000					
Q30-10		0.00	0.00	0.000	0.000					
Discharge Data										
	Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH		
			0.0000	0.0000	0.0000	0.000	25.00	7.00		
Parameter Data										
	Parameter Name		Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)				
	CBOD5		25.00	2.00	0.00	1.50				
	Dissolved Oxygen		3.00	8.24	0.00	0.00				
	NH3-N		25.00	0.00	0.00	0.70				

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>								
18D		44281		Trib 44281 to Penn Run								
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-10 Flow												
33.000	0.09	0.00	0.09	.0039	0.00284	.355	4.81	13.56	0.05	3.294	20.21	7.00
Q1-10 Flow												
33.000	0.06	0.00	0.06	.0039	0.00284	NA	NA	NA	0.04	4.175	20.32	7.00
Q30-10 Flow												
33.000	0.12	0.00	0.12	.0039	0.00284	NA	NA	NA	0.06	2.791	20.15	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	6		