pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0218308**
Facility Type	**Non-Municipal**	APS ID	**1022592**
Major / Minor	**Minor**	Authorization ID	**1325851**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Outside In School Of Experiential Ed**	Facility Name	**Outside In School Of Experiential Ed**
Applicant Address	196 Hamill School Road Bolivar, PA 15923-2525	Facility Address	East Side Of Sr 1015 2300' North Of Wilpen Road Wilpen, PA 15658
Applicant Contact	Gene Giernacky (edgit.galute@yahoo.com)	Facility Contact	Justin Franco (jfranco@myoutsidein.org)
Applicant Phone	(724) 238-8441	Facility Phone	(724) 238-8441
Client ID	137026	Site ID	527173
Ch 94 Load Status	Not Overloaded	Municipality	Fairfield Township
Connection Status	No Limitations	County	Westmoreland
Date Application Received	August 31, 2020	EPA Waived?	Yes
Date Application Accepted	September 2, 2020	If No, Reason	

Purpose of Application: Application for the renewal of an individual NPDES permit.

Summary of Review

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.

NOTE: A typographical error was discovered in WQM6515400 issued 4/5/16. The Annual Average Flow and the Design Hydraulic Capacity were listed as 0.10 MGD. These values should be 0.010 MGD.

Approve	Deny	Signatures	Date
X		Jonathan P. Peterman Jonathan P. Peterman / Project Manager	April 9, 2021
X		Nicholas W. Hartranft Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	April 12, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.010
Latitude	40º 17' 48.89"	Longitude	-79º 10' 33.57"
Quad Name	Wilpen	Quad Code	1612
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Hannas Run (CWF)	Stream Code	43682
NHD Com ID	125293456	RMI	0.8
Drainage Area	0.62 mi^2	Yield (cfs/mi^2)	0.0186
Q_{7-10} Flow (cfs)	0.0115	Q_{7-10} Basis	Stream Gage No. 3045000
Elevation (ft)	1,311	Slope (ft/ft)	N/A
Watershed No.	18-C	Chapter 93 Class.	CWF
Existing Use	CWF	Existing Use Qualifier	N/A
Exceptions to Use	None.	Exceptions to Criteria	None.
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	N/A		
Source(s) of Impairment	N/A		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Nearest Downstream Public Water Supply Intake	Latrobe Municipal Authority		
PWS Waters	Loyalhanna Creek	Flow at Intake (cfs)	
PWS RMI	30.02	Distance from Outfall (mi)	13.75

Changes Since Last Permit Issuance: The Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. A Q_{7-10} analysis was conducted using a downstream stream gage (3045000) as the reference stream gage. There have been no significant modifications to the facility, discharge or receiving waters. Therefore, the previous analysis will be utilized.

Other Comments: None.

Treatment Facility Summary

Treatment Facility Name: Outside In School Of Experiential Ed

WQM Permit No.	Issuance Date	Comments
6515400	04/05/2016	New treatment system and capacity increase from 0.0045 to 0.010.
6500401	04/06/2000	Initial construction.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Ultraviolet	0.010
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.010	41.7	Not Overloaded	Aerobic Digestion	Other WWTP

Treatment Components:

- One (1) Manual Bar Screen.
- One (1) 4,014-gallon Flow Equalization Tank (FET).
- One (1) Forward flow control box.
- One (1) 4,058-gallon Anoxic Tank for denitrification.
- Three (3) Aeration Tanks. The 3 aeration tanks have a total capacity of 24,915 gallons.
- One (1) Dual hopper bottom rectangular clarifier.
- One (1) Ultraviolet disinfection system.
- One (1) 4,015-gallon aerated waste sludge holding tank.
- Four (4) Plant blowers.
- One (1) Soda ash chemical feed system.

Changes Since Last Permit Issuance: None.
Other Comments: None.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

TMDL Impairment

The Department's Geographic Information System (GIS) shows that the Unnamed Tributary to Hannas Run is not impaired and it is attaining its use. A TMDL does exist for this watershed due metals, pH, and siltation caused by AMD. There are no wasteload allocations for this stream segment or this facility. No further TMDL review is required.

Existing Effluent Limitations and Monitoring Requirements

Existing Limits – Outfall 001

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)	0.010	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10000	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	4.0	XXX	8.0	2/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	12.0	XXX	24.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

*The existing effluent limits for Outfall 001 were based on a design flow of 0.010 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.010
Latitude 40º 17' 48.89" **Longitude** -79 º 10' 33.57"
Wastewater Description: Treated 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)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the Toxics Management Spreadsheet (TMS). The TMS was not utilized in this review.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen

The previous model was run using the latest information on Q7-10 stream flow, background water quality, average annual design flow, and other discharge characteristics. There were no changes to the facility or watershed since the previous review. The existing technology-based effluent limit for $CBOD_5$ (25 mg/l) and existing water quality-based effluent limit for NH3-N (4.0 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (5.0 mg/L for CWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	25	N/A	N/A
Ammonia-N	4.0	8.0	N/A
Dissolved Oxygen	N/A	N/A	3

The previous water-quality based effluent limitations with regards to ammonia-nitrogen will remain. Refer to the previous fact sheet for the WQM 7.0 inputs and results. CBOD5 and dissolved oxygen will remain as well.
Comments: None.

Best Professional Judgment (BPJ) Limitations

See Dissolved Oxygen section below.
Comments: None.

Additional Considerations

None

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 the abovementioned 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) and/or BPJ.

Proposed Limits - 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)	0.010	XXX	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
UV Dosage (µWs/cm^2)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	Grab
Total Suspended Solids	XXX	XXX	XXX	30	XXX	60	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/Year	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	XXX	4.0	XXX	8.0	2/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	XXX	12.0	XXX	24.0	2/month	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/year	Grab

*The proposed effluent limits for Outfall 001 were based on a design flow of 0.010 MGD.

Effluent Limit Determination for Outfall 001

General Information

The associated mass-based limits (lbs/day) for all parameters were based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34). All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits. The existing monitoring frequencies and sample types for these parameters generally correspond with the *Technical Guidance for the Development and Specification of Effluent Limitations* (362-0400-001) Table 6-3 and will remain.

Flow
Reporting of the average monthly is consistent with monitoring requirements for other treatment plants of this size and will remain.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
The results of the previous WQM 7.0 model show that the previously applied secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for $CBOD_5$ are protective of water quality and will remain.

Total Suspended Solids (TSS)
The previously applied technology based secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for TSS will remain as well.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH. The existing limits will remain.

UV Disinfection
At a minimum, routine monitoring of UV transmittance (%), UV dosage (µWs/cm^2 or mWs/cm^2 or mjoules/cm^2) or UV intensity (µW/cm^2 or mW/cm^2) will be required. UV dosage (µWs/cm^2) was input as a placeholder. The permittee will verify what units the existing meter reports during the comment period and the units will be adjusted accordingly when the permit is issued.

If existing system is unable to monitor and report on UV system operation in one of the standard units listed above, a parameter of "UV Functional" may be reported on the Daily Effluent Monitoring Form (3800-FM-BCW0435). Permittees reporting using this method will select the "UV Functional" parameter with Units of "Y/N" on the Limits worksheet and report values of "1" for Yes (UV Functional) and "< 1" for No (UV Not Functional).

Fecal Coliforms
The existing fecal coliform limits with I-max limits were updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5) and will remain.

E. Coli
25 PA Code § 92a.61 provide the basis of monitoring requirements for E. Coli. Yearly monitoring will be required going forward.

Ammonia-Nitrogen (NH3-N)
The results of the WQM 7.0 model show that water quality-based effluent limits for ammonia-nitrogen are still protective and will remain.

Dissolved Oxygen (DO)
25 PA Code §93.7 provides specific water quality criteria for DO and monitoring for this parameter will ensure that the facility is not creating or contributing to an in-stream excursion below these water quality standards. The existing limit will remain.

Additional Considerations
A once a year M&R requirement for Total N and Total P is imposed on this facility as per Chapter § 92.a.61.

Compliance History

Summary of Inspections -The most recent Clean Water Program Compliance Inspection was conducted on 8/31/2020. The report indicated numerous effluent violations over the previous 5 years.

WMS Query Summary - A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed no open violations.

eDMRs Summary - Upon review of the eDMR's, the facility has generally been in compliance with the existing effluent limits except for the two minor violations listed below.

Compliance History

DMR Data for Outfall 001 (from February 1, 2020 to January 31, 2021)

Parameter	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20
Flow (MGD) Average Monthly	0.003	0.003	0.009	0.003	0.006	0.0031	0.004	0.003	0.003	0.003	0.004	0.0048
pH (S.U.) Minimum	6.2	6.8	7.2	7.2	6.7	6.8	6.7	6.7	6.4	5.9	7.0	7.1
pH (S.U.) Maximum	7.9	7.6	8.4	8.1	7.2	7.2	7.2	7.2	7.3	7.9	8.8	8.2
DO (mg/L) Minimum	8.8	7.6	6.9	6.5	5.1	5.01	5.01	5.2	7.2	5.4	7.4	8.0
CBOD5 (mg/L) Average Monthly	< 3	< 4	8	< 8	< 3	< 3	< 4	< 4	< 4	6	6.3	< 5
CBOD5 (mg/L) Instantaneous Maximum	< 3	5.14	11	< 12	< 3	< 3	5	5.2	5	6.42	7.6	6
TSS (mg/L) Average Monthly	< 5	< 5	< 27	8	< 5	< 5	< 5	< 5	8	< 10	< 19	< 7
TSS (mg/L) Instantaneous Maximum	< 5	< 5	93	9	5	< 5	< 5	< 5	8	15	33	9
Fecal Coliform (CFU/100 ml) Geometric Mean	< 1	< 1	< 1	69	81	< 1	3	< 1	< 1	< 49	< 12	< 4
Total Nitrogen (mg/L) Daily Maximum		26.6										
Ammonia (mg/L) Average Monthly	< 0.8	< 0.8	< 0.8	< 1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Ammonia (mg/L) Instantaneous Maximum	< 0.8	< 0.8	< 0.8	< 1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Phosphorus (mg/L) Daily Maximum		1.7										

Effluent Violations for Outfall 001, from: March 1, 2020 To: January 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	04/30/20	Min	5.9	S.U.	6.0	S.U.
TSS	11/30/20	IMAX	93	mg/L	60	mg/L

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Previous Fact Sheet)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model 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:
☐	Other: