

Application Type Renewal
Facility Type Non-Municipal
Major / Minor Minor

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No. PA0052132
APS ID 622617
Authorization ID 1478951

Applicant and Facility Information

| | | | |
|---------------------------|---|------------------|---|
| Applicant Name | <u>Parkland School District</u> | Facility Name | <u>Parkland School District Orefield Mid School</u> |
| Applicant Address | <u>2219 N Cedar Crest Boulevard</u> <u>Allentown, PA 18104-9665</u> | Facility Address | <u>4502 Lime Kiln Drive</u> <u>Orefield, PA 18069-2321</u> |
| Applicant Contact | <u>Arthur Oakes</u> | Facility Contact | <u>Arthur Oakes</u> |
| Applicant Phone | <u>(610) 351-5587</u> | Facility Phone | <u>(610) 351-5587</u> |
| Client ID | <u>51892</u> | Site ID | <u>249436</u> |
| Ch 94 Load Status | <u>Not Overloaded</u> | Municipality | <u>South Whitehall Township</u> |
| Connection Status | | County | <u>Lehigh</u> |
| Date Application Received | <u>April 1, 2024</u> | EPA Waived? | <u>Yes</u> |
| Date Application Accepted | <u>April 5, 2024</u> | If No, Reason | |
| Purpose of Application | <u>Renewal of existing NPDES permit to discharge treated sewage effluent.</u> | | |

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge 0.0093 MGD of treated sewage to Jordan Creek, a Trout Stocking, Migratory Fish (TSF, MF) receiving stream in State Water Plan Basin 2C (Lower Lehigh River). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This stream segment is not designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

The system for this facility is primary treatment via bar screening, followed by two extended aeration tanks, and finally a chlorine contact tank for disinfection. This facility also uses treatment chemicals Soda Ash (pH control) and Sodium Bisulfate (dechlorination) in this process.

The receiving stream is impaired by URBAN RUNOFF/STORM SEWERS - SILTATION; URBAN RUNOFF/STORM SEWERS - FLOW REGIME MODIFICATION. This discharge is not expected to impact this impairment.

The facility reports 3.352 dry tons of sludge is hauled annually via independent contractor to Lehigh County Pretreatment.

There are no representative stream gages in the vicinity of the outfall. A standard low flow yield (LFY) of 0.1 cfs/mi² was used to model the discharge. RMI values were obtained using the Department's eMapPA, drainage areas were delineated using USGS's StreamStats interactive map, and elevations were obtained using the elevation profile tool on StreamStats.

E. Coli monitoring requirements will be introduced into the new permit according to PA DEP policy for individual sewage effluent limitations. E. Coli requirements for a treatment plant with less than .05 MGD discharge is found in the SOP for establishing effluent limitations for individual sewage.

| Approve | Deny | Signatures | Date |
|---------|------|--|----------------|
| X | | <i>William Hon</i> William Hon / Environmental Engineer Specialist | April 10, 2025 |
| X | | <i>Edward Dudick</i> Edward Dudick, P.E. / Environmental Engineer Manager | April 17, 2025 |

Summary of Review

Limitations for pH, CBOD₅, Total Suspended Solids, Dissolved Oxygen (DO), and Fecal Coliform are technology-based and carried over from the previous permit. Limitations for Ammonia-Nitrogen and Total Residual Chloride (TRC) are water quality-based and carried over from the previous permit. WQM modeling did not recommend stricter limitations for Ammonia-Nitrogen.

Annual monitoring requirements for Total Dissolved Solids, Total Nitrogen, Total Phosphorus, Nitrate-Nitrite as N, and Total Kjeldahl Nitrogen are carried over from the previous permit.

- Special conditions added into this permit:
- Chlorine Minimization
 - DRBC May Have Other Requirements
 - Solids Management

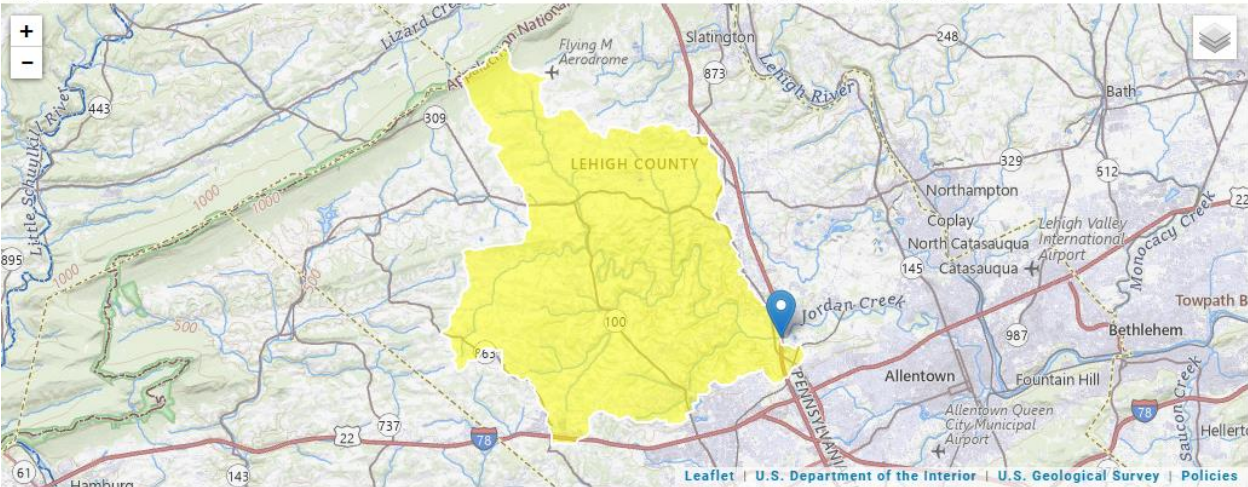
The previous inspection performed at this facility occurred on 1/4/2024 and resulted in zero (0) NOV's. There are no open violations in the Clean Water Program that would warrant the withholding of the issuance of this permit. Recommend approval.

Modeling Inputs:

PT1 @ Outfall, Stream 3424 (Jordan Creek), 2-C (Lower Lehigh River), TSF MF
RMI: 1.31 (for Modeling Purposes)

Clicked Point (Latitude, Longitude):

Time: 40.62249, -75.57735
2025-04-10 13:05:29 -0400



Collapse All

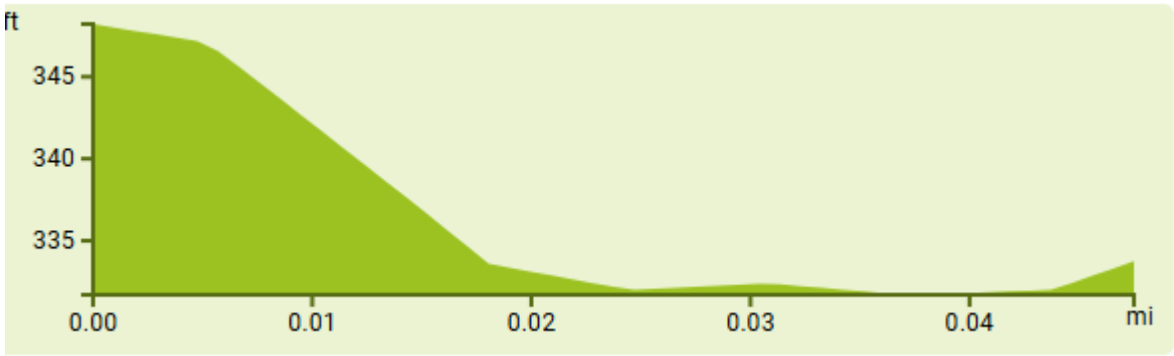
Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|------------------------|---|-------|--------------|
| CARBON | Percentage of area of carbonate rock | 2.33 | percent |
| DRNAREA | Area that drains to a point on a stream | 68.3 | square miles |
| 7 Day 10 Year Low Flow | | 2.27 | ft^3/s |

USGS Gauge 01451800 (Upstream)

| | | |
|---------------------|-----|----------------|
| 7 Day 10 Year Low F | 2.2 | cubic feet per |
| low | | second |

Summary of Review



40.62262 -75.57734 331.81

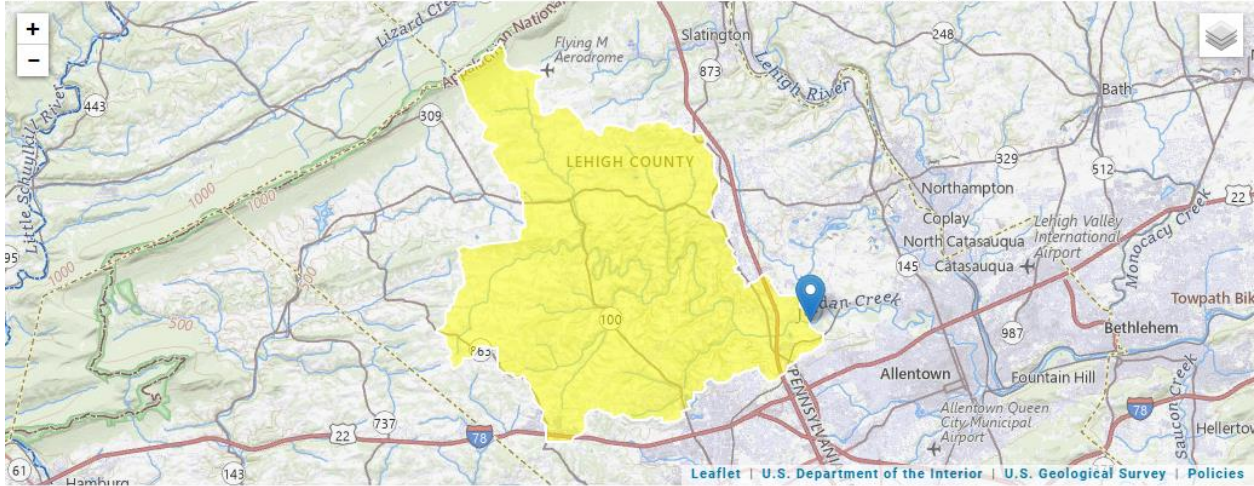
PT2 Approx 1.32 miles away from Outfall 001, RMI: .01 (for modeling purposes)

Clicked Point (Latitude, Longitude):

40.62775, -75.55869

Time:

2025-04-10 13:11:18 -0400



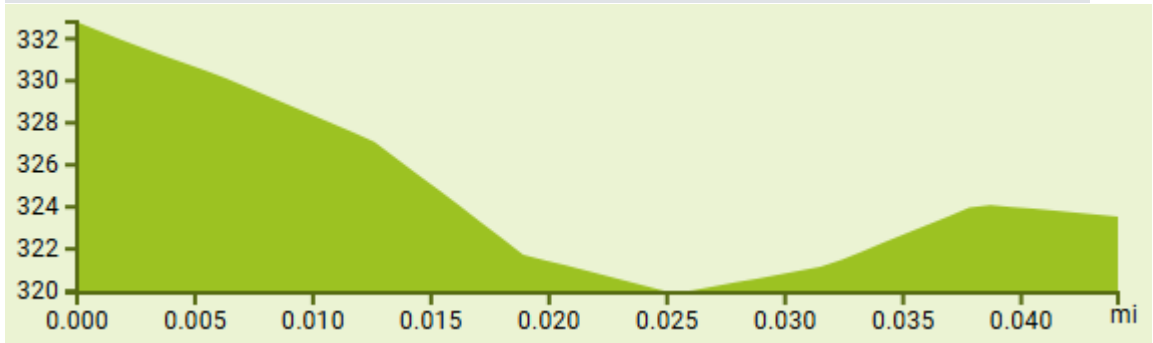
+ Collapse All

Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|----------------|---|-------|--------------|
| CARBON | Percentage of area of carbonate rock | 4.25 | percent |
| DRNAREA | Area that drains to a point on a stream | 70.3 | square miles |

7 Day 10 Year Low Flow

2.71



40.62782 -75.55863 319.91

Summary of Review

Analysis Results WQM 7.0

Hydrodynamics
NH3-N Allocations
D.O. Allocations
D.O. Simulation
Effluent Limitations

| RMI | Discharge Name | Permit Number | Disc Flow (mgd) |
|------|----------------|---------------|-----------------|
| 1.31 | Orefield | PA0052132 | 0.0093 |

| Parameter | Effluent Limit 30 Day Average (mg/L) | Effluent Limit Maximum (mg/L) | Effluent Limit Minimum (mg/L) |
|------------------|--|-------------------------------------|-------------------------------------|
| CBOD5 | 25 | | |
| NH3-N | 25 | 50 | |
| Dissolved Oxygen | | | 3 |

Record: 1 of 1
No Filter
Search

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

| | | | |
|--------|--------------------------------|-----|--------------------------------------|
| 2.27 | = Q stream (cfs) | 0.5 | = CV Daily |
| 0.0093 | = Q discharge (MGD) | 0.5 | = CV Hourly |
| 30 | = no. samples | 1 | = AFC_Partial Mix Factor |
| 0.3 | = Chlorine Demand of Stream | 1 | = CFC_Partial Mix Factor |
| 0 | = Chlorine Demand of Discharge | 15 | = AFC_Criteria Compliance Time (min) |
| 0.5 | = BAT/BPJ Value | 720 | = CFC_Criteria Compliance Time (min) |
| 0 | = % Factor of Safety (FOS) | | = Decay Coefficient (K) |

| Source | Reference | AFC Calculations | Reference | CFC Calculations |
|--------------|-----------|---------------------|-----------|---------------------|
| TRC | 1.3.2.iii | WLA afc = 50.351 | 1.3.2.iii | WLA cfc = 49.081 |
| PENTOXSD TRG | 5.1a | LTAMULT afc = 0.373 | 5.1c | LTAMULT cfc = 0.581 |
| PENTOXSD TRG | 5.1b | LTA_afc = 18.762 | 5.1d | LTA_cfc = 28.533 |

| Source | Effluent Limit Calculations |
|--------------|--|
| PENTOXSD TRG | 5.1f AML MULT = 1.231 |
| PENTOXSD TRG | 5.1g AVG MON LIMIT (mg/l) = 0.500 INST MAX LIMIT (mg/l) = 1.635 |
| | BAT/BPJ |

Public Participation

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.



Pennsylvania
Department of
Environmental Protection