pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Southwest Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **New** | Application No. | **PA0285153** |
| Wastewater Type | **Sewage** | APS ID | **1093851** |
| Facility Type | **SRSTP** | Authorization ID | **1449152** |

# NPDES PERMIT FACT SHEET
# INDIVIDUAL SRSTP/SRSTP

## Applicant, Facility and Project Information

| | | | |
|---|---|---|---|
| Applicant Name | **Joseph Portera** | Facility Name | **Portera Properties SRSTP** |
| Applicant Address | 600 Hayden Boulevard | Facility Address | 869 Peninsula Drive |
| | Elizabeth, PA 15037-1600 | | Central City, PA 15926-9116 |
| Applicant Contact | Carrie Eckenrod | Facility Contact | Same as Applicant |
| Applicant Phone | (412) 384-8170 | Facility Phone | Same as Applicant |
| Client ID | 378938 | Site ID | 866234 |
| SIC Code | 8800 | Municipality | Indian Lake Borough |
| SIC Description | Private Households | County | Somerset |
| Date Application Received | July 27, 2023 | WQM Required | Yes |
| Date Application Accepted | August 1, 2023 | WQM App. No. | 5623400 |

Project Description: Application for a new NPDES permit authorize a discharge of a treated Sewage.

## Summary of Review

The applicant proposes to construct a 800 GPD Single Residence Sewage Treatment facility (SRSTP) that will serve an existing three bedroom dwelling in Indian Lake Borough, Somerset County. The proposed SRSTP will replace an existing malfunctioning on-lot system. It is the owner's intention to add 4 more bedrooms to the dwelling for a total treated sewage flow of 800 GPD.

Any additional flow to this dwelling (e.g., addition of 100 GPD to the treatment system capacity) will have to go through DEP permit amendment process.

WQM Permit 5623400 was issued on September 21, 2023 to allow the permittee to start the construction process. However, it was indicated in the cover letter that discharge was not to continue until the final NPDES permit was issued. The discharge would be directly to Indian Lake which is classified as CWF and located in State Watershed 18-E.

The treatment plant that will be constructed on site consists of a EC7-1350-P-P Ecoflo Coco Filter with 0.5 HP Ecoflo integrated pump, Two in series two compartments septic tanks with a total volume of 2500 gallons, a Norweco AT 1500 UV Disinfection System preinstalled by the manufacturer.

The Premier Tech treatment unit has a rated capacity of 1350 GPD and it's NSF Certified for the treatment of Residential Wastewater.

The Site Plans shows an average of 60 feet of a 4 in schedule 40 pipe that will deliver the effluent from the dwelling to the point of discharge (Indian Lake), which is located adjacent to the applicant property (see page 8, verified over eMap PA).

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Hazim Aldalli / Environmental Engineering Specialist | October 04, 2023 |
| x | | Mahbuba Iasmin / Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager | October 26, 2023 |

**Summary of Review**

Checking on the effluent pump specs and operation, the 0.5 HP pump will generate a 49 inch of head that can travel a 75 ft of horizontal distance max. using a 1.5 Ø SCH 40 PVC pressurized pipe; the pump will deliver the produced head to the distribution Box. After that, the pipe size changes to 4 inches and the flow will be on gravity to the discharge point which is about 12 ft of distance (see page 9 of this fact Sheet).

The effluent pipe diameter listed on the Site plan is 4 inches and it is consistent with the DEP's Small Facilities Manual, Dec. 2006.

Sampling should be grabbed after disinfection. Sampling Port is described under Sec. 2.6 on page 58 of the Owner's Manual, also can be checked over the unit drawings (see page 9).

DEP's current policy does not require eDMR to be used for SRSTP.

Act 537 Planning was approved for this project on June 8, 2023. The facility has failing on-lot system, and therefore, is seeking approval for direct discharge to Indian Lake.

The applicant has no open, or unresolved violations.

The Act – 14 PL 834 Municipal Notifications were provided by the July 7, 2023 letters attached to the application, and no comments were noticed.

Permit issuance is recommended.

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.

Discharge and Stream Data – 2 - Receiving Waters and PWS

**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.0008 |
| Latitude | 40º 2' 52" | Longitude | -78º 51' 37" |
| Quad Name | Central City | Quad Code | 40078A7 |
| Wastewater Description: | Sewage Effluent | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Rhoads Creek (CWF); Indian Lake | Stream Code | 45737 |
| NHD Com ID | 123727486 | RMI | 4.91 |
| Drainage Area | 5.15 | Yield (cfs/mi$^2$) | 0.064 |
| $Q_{7-10}$ Flow (cfs) | 0.33 | $Q_{7-10}$ Basis | USGS StreamStats |
| Elevation (ft) | 2446 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-E | Chapter 93 Class. | CWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | None. | Exceptions to Criteria | None. |
| Assessment Status | Not Assessed; Attaining Use: Portable Water Supply, Aquatic Life, Recreational. | | |
| Cause(s) of Impairment | Not impaired. | | |
| Source(s) of Impairment | None. | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

| Background/Ambient Data | | Data Source |
|---|---|---|
| pH (SU) | | |
| Temperature (°F) | | |
| Hardness (mg/L) | | |
| Other: | | |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | None within the State. | | |
| PWS Waters | | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | >40.0 |

Changes Since Last Permit Issuance: N/A (New Facility).

Other Comments: None.

| Treatment Facility Summary | | | | |
|---|---|---|---|---|
| **Treatment Facility Name:** Portera Properties SRSTP. | | | | |
| **WQM Permit No.** | **Issuance Date** | | | |
| 5623400 | September 21, 2023 | | | |
| **Waste Type** | **Degree of Treatment** | **Process Type** | **Disinfection** | **Avg Annual Flow (MGD)** |
| Sewage | Tertiary | Septic Tank, Sand Filter | Ultraviolet | 0.0008 |
| | | | | |
| **Hydraulic Capacity (MGD)** | **Organic Capacity (lbs/day)** | **Load Status** | **Biosolids Treatment** | **Biosolids Use/Disposal** |
| 0.0008 | --- | Not Overloaded | Septic Tank | ----- |

Changes Since Last Permit Issuance: N/A (New Facility).

## Development of Effluent Limitations

**Outfall No.** 001 **Design Flow (MGD)** 0.0008
**Latitude** 40º 2' 52" **Longitude** -78º 51' 37"

**Wastewater Description:** Treated Sewage Effluent

### Technology-Based Limitations (TBELs)

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SRSTP permits based on the requirements of DEP's "Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Single Residence Treatment Facility Individual NPDES Permit Application" (SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised May 17, 2019).

| Parameter | Avg | IMAX | Sample Type | Frequency: SFTFs | Frequency: SRSTPs |
|---|---|---|---|---|---|
| Flow (GPD) | Report | XXX | Estimate (SRSTPs) Measured (SFTFs) | 1/month | 1/year |
| BOD5 (mg/L) | 10 | 20 | Grab | 1/month | 1/year |
| TSS (mg/L) | 10 | 20 | Grab | 1/month | 1/year |
| pH* | 6.0 S.U. Inst. Min. | 9.0 S.U. | Grab | 1/month | 1/year |
| TRC (mg/L) | Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs | | Grab | 1/month | 1/year |
| Fecal Coliform (No./100 ml) | 200 Geometric Mean (SFTFs) / Average (SRSTPs) | | Grab | 1/month | 1/year |

***** Technology-Based effluent limits for pH will be imposed based upon Federal Regulation 133.102(c) and State Regulation 95.2(1).
** Use the Geometric Mean if the Sampling Frequency is at least 1/month. Use Annual Average, Semi-Annual Average or Quarterly Average if the Sampling Frequency is less than 1/month.

### Additional Considerations:

After checking on the proposed treatment plant (Premier Tech EC7-1350-P-P) technical specs, this treatment unit can achieve the stringent limits imposed since it is included within the plant's design manual, and it is NSF approved.

$BOD_5$ limitations will be imposed instead of $CBOD_5$ which reflect the most stringent limitation amongst the Technology-Based Effluent Limitations and based upon the Department's SOP – New and Reissuance Individual SRSTP NPDES Permits, and per DEP's Small Treatment Facilities Manual (Dec. 2006).

Technology-based effluent limits for pH will be imposed based upon State Regulation 95.2(1).

For SRSTPs with UV disinfection systems, it is not necessary to require UV intensity or transmittance monitoring in the permit.

Indian Lake has mesotrophic influence according to the 2007 PADEP Lake Trophic State study. No nutrient pollution or trophic conditions was assigned to the lake in the Kiskiminetas-Conemaugh River Watersheds TMDL final report issued in 2010. Additionally, sewage discharges with design flows < 2,000 gpd do not require monitoring for Total Nitrogen and Total Phosphorus in new and reissued permits per Department's *SOP- New and Reissuance of SRSTP Individual NPDES Permit Applications*. Therefore, no nutrient monitoring will be imposed at Outfall 001.

Sampling frequency for all parameters is 1/year which is consistent with the Department's *SOP - New and Reissuance of SRSTP Individual NPDES Permit Applications*.

The applicant does not use eDMR and current policy does not require eDMR to be used for SRSTPs.

**Total Maximum Daily Load (TMDL) Considerations**

This facility discharges to the Kiskiminetas-Conemaugh River Watersheds. This Watershed has a Final TMDL and is impaired by metals. The receiving stream Rhoads Creek (CWF)/Indian Lake is not impaired and attaining its uses (per eMap PA, see page 3). Checking on the final TMDL document; abandoned mine drainage is the source of the TMDL impairment. This small sanitary sewage discharge is not expected to contribute to the stream metals impairment. No WLAs have been developed for this stream segment 45737 (per Appendix G for Kiski TMDL); no monitoring requirements for Total Iron, Total Manganese, and Total Aluminum will be imposed on this facility for this permit.

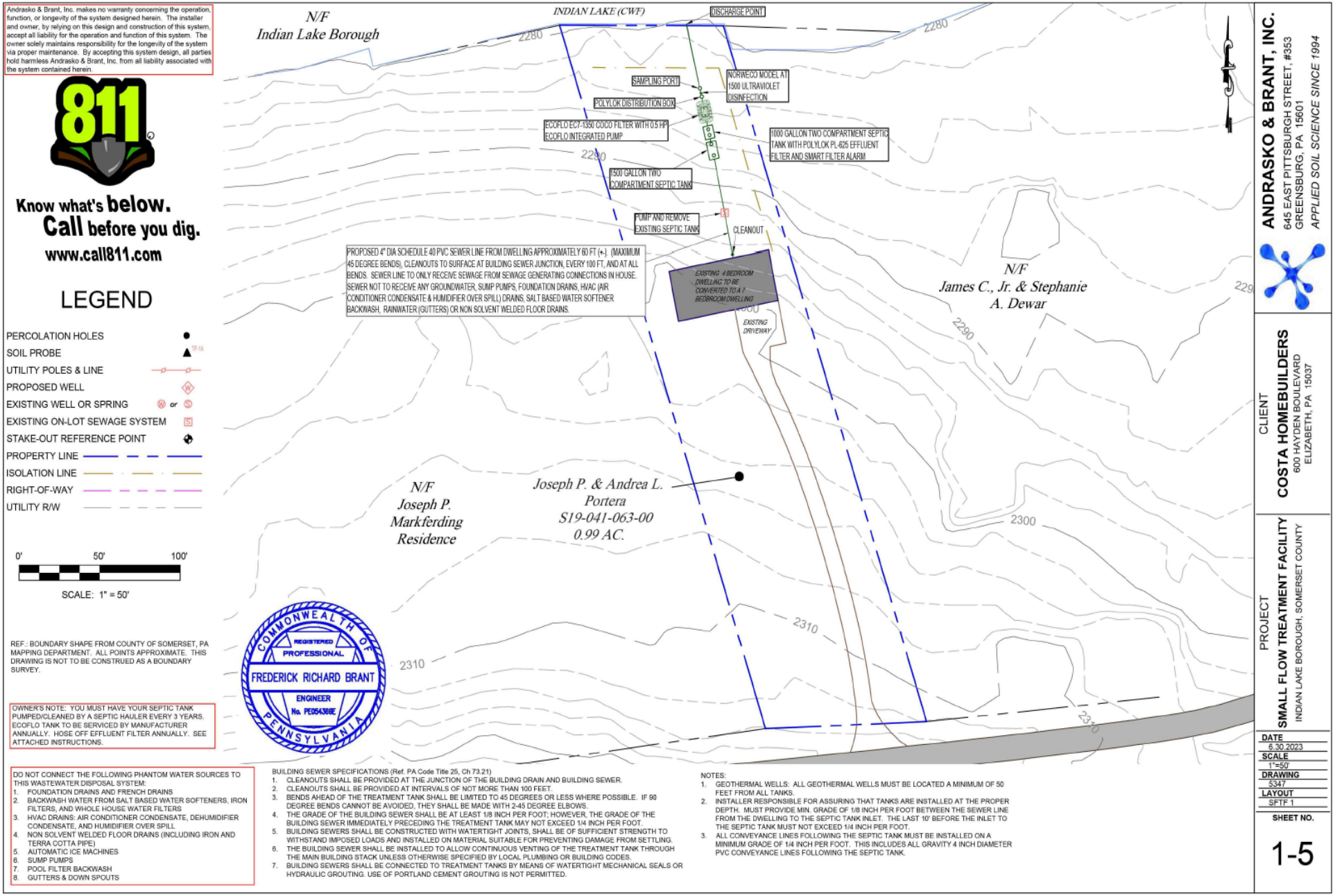
## Proposed Effluent Limitations and Monitoring Requirements

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) | | Concentrations (mg/L) | | | | Minimum Measurement Frequency | Required Sample Type |
| | Annual Average | Average Weekly | Minimum | Annual Average | Maximum | Instant. Maximum | | |
| Flow (MGD) | Report | XXX | XXX | XXX | XXX | XXX | 1/year | Estimate |
| pH (S.U.) | XXX | XXX | 6.0 Inst. Min | XXX | 9.0 Inst. Max | XXX | 1/year | Grab |
| BOD5 | XXX | XXX | XXX | 10 | XXX | 20 | 1/year | Grab |
| TSS | XXX | XXX | XXX | 10 | XXX | 20 | 1/year | Grab |
| Fecal Coliform (No./100 ml) | XXX | XXX | XXX | 200 | XXX | XXX | 1/year | Grab |

Compliance Sampling Location: Outfall 001.


Andrasko & Brant, Inc. makes no warranty concerning the operation, function, or longevity of the system designed herein. The installer and owner, by relying on this design and construction of this system, accept all liability for the operation and function of this system. The owner solely maintains responsibility for the longevity of the system via proper maintenance. By accepting this system design, all parties hold harmless Andrasko & Brant, Inc. from all liability associated with the system contained herein.
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Know what's below.
Call before you dig.
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LEGEND
PERCOLATION HOLES
SOIL PROBE
UTILITY POLES & LINE
PROPOSED WELL
EXISTING WELL OR SPRING
or
EXISTING ON-LOT SEWAGE SYSTEM
STAKE-OUT REFERENCE POINT
PROPERTY LINE
ISOLATION LINE
RIGHT-OF-WAY
UTILITY R/W
0'
50'
100'
SCALE: 1" = 50'
REF.: BOUNDARY SHAPE FROM COUNTY OF SOMERSET, PA MAPPING DEPARTMENT. ALL POINTS APPROXIMATE. THIS DRAWING IS NOT TO BE CONSTRUED AS A BOUNDARY SURVEY.
OWNER'S NOTE: YOU MUST HAVE YOUR SEPTIC TANK PUMPED/CLEANED BY A SEPTIC HAULER EVERY 3 YEARS. ECOFLO TANK TO BE SERVICED BY MANUFACTURER ANNUALLY. HOSE OFF EFFLUENT FILTER ANNUALLY. SEE ATTACHED INSTRUCTIONS.
DO NOT CONNECT THE FOLLOWING PHANTOM WATER SOURCES TO THIS WASTEWATER DISPOSAL SYSTEM:
1. FOUNDATION DRAINS AND FRENCH DRAINS
2. BACKWASH WATER FROM SALT BASED WATER SOFTENERS, IRON FILTERS, AND WHOLE HOUSE WATER FILTERS
3. HVAC DRAINS: AIR CONDITIONER CONDENSATE, DEHUMIDIFIER CONDENSATE, AND HUMIDIFIER OVER SPILL
4. NON SOLVENT WELDED FLOOR DRAINS (INCLUDING IRON AND TERRA COTTA PIPE)
5. AUTOMATIC ICE MACHINES
6. SUMP PUMPS
7. POOL FILTER BACKWASH
8. GUTTERS & DOWN SPOUTS
N/F
Indian Lake Borough
INDIAN LAKE (CWF)
DISCHARGE POINT
2280
SAMPLING PORT
NORWECO MODEL AT 1500 ULTRAVIOLET DISINFECTION
POLYLOK DISTRIBUTION BOX
ECOFLO ECF-1350 COCO FILTER WITH 0.5 HP ECOFLO INTEGRATED PUMP
1000 GALLON TWO COMPARTMENT SEPTIC TANK WITH POLYLOK PL-625 EFFLUENT FILTER AND SMART FILTER ALARM
2290
1500 GALLON TWO COMPARTMENT SEPTIC TANK
PUMP AND REMOVE EXISTING SEPTIC TANK
CLEANOUT
PROPOSED 4" DIA SCHEDULE 40 PVC SEWER LINE FROM DWELLING APPROXIMATELY 60 FT (+). (MAXIMUM 45 DEGREE BENDS). CLEANOUTS TO SURFACE AT BUILDING SEWER JUNCTION, EVERY 100 FT, AND AT ALL BENDS. SEWER LINE TO ONLY RECEIVE SEWAGE FROM SEWAGE GENERATING CONNECTIONS IN HOUSE. SEWER NOT TO RECEIVE ANY GROUNDWATER, SUMP PUMPS, FOUNDATION DRAINS, HVAC (AIR CONDITIONER CONDENSATE & HUMIDIFIER OVER SPILL) DRAINS, SALT BASED WATER SOFTENER BACKWASH, RAINWATER (GUTTERS) OR NON SOLVENT WELDED FLOOR DRAINS.
EXISTING 4 BEDROOM DWELLING TO BE CONVERTED TO A 7 BEDROOM DWELLING
EXISTING DRIVEWAY
N/F
James C., Jr. & Stephanie A. Dewar
2290
2300
N/F
Joseph P. Markferding Residence
Joseph P. & Andrea L. Portera
S19-041-063-00
0.99 AC.
2310
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
FREDERICK RICHARD BRANT
ENGINEER
No. PE054368E
BUILDING SEWER SPECIFICATIONS (Ref. PA Code Title 25, Ch 73.21)
1. CLEANOUTS SHALL BE PROVIDED AT THE JUNCTION OF THE BUILDING DRAIN AND BUILDING SEWER.
2. CLEANOUTS SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 100 FEET.
3. BENDS AHEAD OF THE TREATMENT TANK SHALL BE LIMITED TO 45 DEGREES OR LESS WHERE POSSIBLE. IF 90 DEGREE BENDS CANNOT BE AVOIDED, THEY SHALL BE MADE WITH 2-45 DEGREE ELBOWS.
4. THE GRADE OF THE BUILDING SEWER SHALL BE AT LEAST 1/8 INCH PER FOOT; HOWEVER, THE GRADE OF THE BUILDING SEWER IMMEDIATELY PRECEDING THE TREATMENT TANK MAY NOT EXCEED 1/4 INCH PER FOOT.
5. BUILDING SEWERS SHALL BE CONSTRUCTED WITH WATERTIGHT JOINTS, SHALL BE OF SUFFICIENT STRENGTH TO WITHSTAND IMPOSED LOADS AND INSTALLED ON MATERIAL SUITABLE FOR PREVENTING DAMAGE FROM SETTLING.
6. THE BUILDING SEWER SHALL BE INSTALLED TO ALLOW CONTINUOUS VENTING OF THE TREATMENT TANK THROUGH THE MAIN BUILDING STACK UNLESS OTHERWISE SPECIFIED BY LOCAL PLUMBING OR BUILDING CODES.
7. BUILDING SEWERS SHALL BE CONNECTED TO TREATMENT TANKS BY MEANS OF WATERTIGHT MECHANICAL SEALS OR HYDRAULIC GROUTING. USE OF PORTLAND CEMENT GROUTING IS NOT PERMITTED.
NOTES:
1. GEOTHERMAL WELLS: ALL GEOTHERMAL WELLS MUST BE LOCATED A MINIMUM OF 50 FEET FROM ALL TANKS.
2. INSTALLER RESPONSIBLE FOR ASSURING THAT TANKS ARE INSTALLED AT THE PROPER DEPTH. MUST PROVIDE MIN. GRADE OF 1/8 INCH PER FOOT BETWEEN THE SEWER LINE FROM THE DWELLING TO THE SEPTIC TANK INLET. THE LAST 10' BEFORE THE INLET TO THE SEPTIC TANK MUST NOT EXCEED 1/4 INCH PER FOOT.
3. ALL CONVEYANCE LINES FOLLOWING THE SEPTIC TANK MUST BE INSTALLED ON A MINIMUM GRADE OF 1/4 INCH PER FOOT. THIS INCLUDES ALL GRAVITY 4 INCH DIAMETER PVC CONVEYANCE LINES FOLLOWING THE SEPTIC TANK.
ANDRASKO & BRANT, INC.
645 EAST PITTSBURGH STREET, #353
GREENSBURG, PA 15601
APPLIED SOIL SCIENCE SINCE 1994
CLIENT
COSTA HOMEBUILDERS
600 HAYDEN BOULEVARD
ELIZABETH, PA 15037
PROJECT
SMALL FLOW TREATMENT FACILITY
INDIAN LAKE BOROUGH, SOMERSET COUNTY
DATE
6.30.2023
SCALE
1"=50'
DRAWING
5347
LAYOUT
SFTF 1
SHEET NO.
1-5

BUILDING SEWER SPECIFICATIONS (Ref. PA Code Title 25, Ch 73.21)

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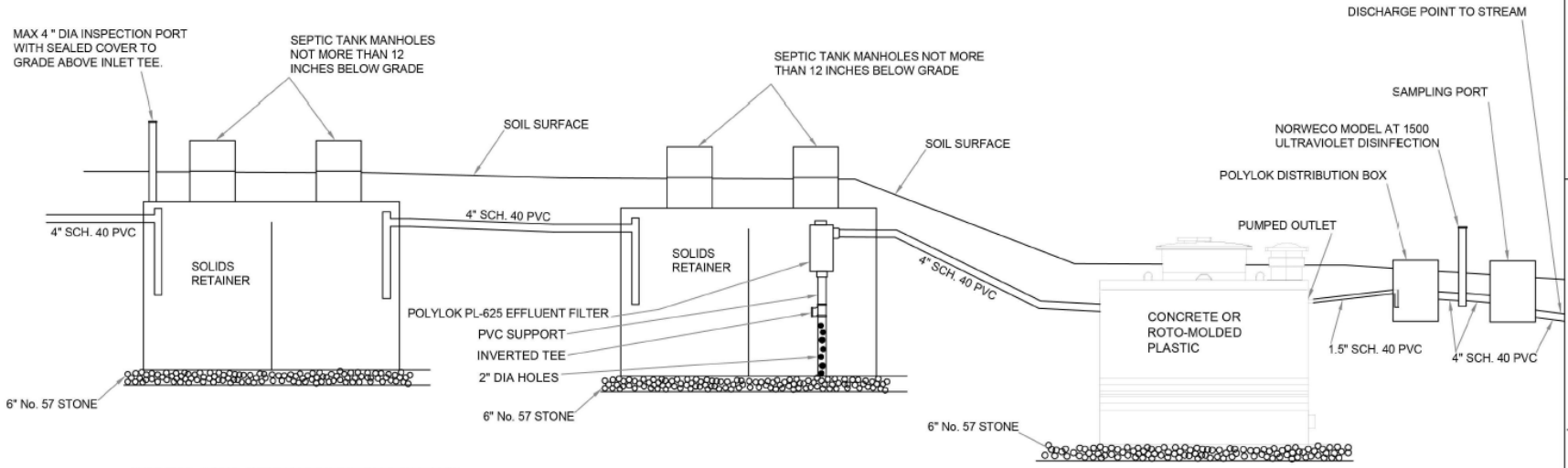
6. THE BUILDING SEWER SHALL BE INSTALLED TO ALLOW CONTINUOUS VENTING OF THE TREATMENT TANK THROUGH THE MAIN BUILDING STACK UNLESS OTHERWISE SPECIFIED BY LOCAL PLUMBING OR BUILDING CODES.
7. BUILDING SEWERS SHALL BE CONNECTED TO TREATMENT TANKS BY MEANS OF WATERTIGHT MECHANICAL SEALS OR HYDRAULIC GROUTING. USE OF PORTLAND CEMENT GROUTING IS NOT PERMITTED.

1.PRECAST CONCRETE TANKS SHALL HAVE A MINIMUM WALL THICKNESS OF 2 1/2" AND BE ADEQUATELY REINFORCED.
2.TANKS SHALL NOT BE CONSTRUCTED OF BLOCKS, BRICKS OR SIMILAR MASONRY CONSTRUCTION.

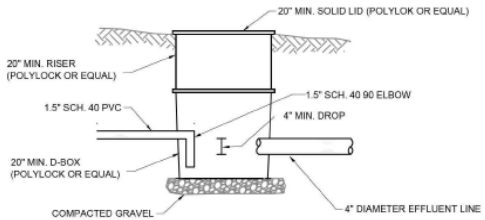
INSTALLER RESPONSIBLE FOR ASSURING THAT TANKS ARE INSTALLED AT THE PROPER DEPTH. MUST PROVIDE MIN. GRADE OF 1/8 INCH PER FOOT BETWEEN THE SEWER LINE FROM THE DWELLING TO THE SEPTIC TANK INLET. THE LAST 10' BEFORE THE INLET TO THE SEPTIC TANK MUST NOT EXCEED 1/4 INCH PER FOOT.



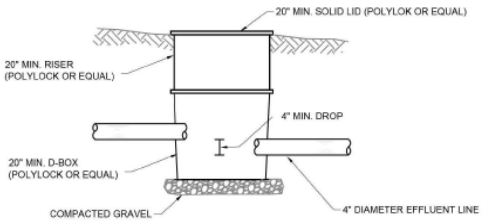

1500 GAL. DUAL COMPARTMENT SEPTIC TANK
NTS

1000 GAL. DUAL COMPARTMENT SEPTIC TANK
NTS

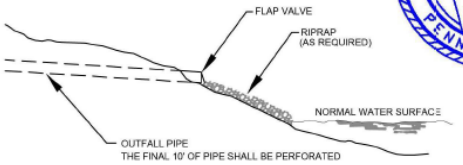
ECOFLO EC7-1350 COCO FILTER
NTS




POLYLOK DISTRIBUTION BOX
NTS




SAMPLING PORT DETAIL
NTS




OUTFALL DETAIL

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
FREDERICK RICHARD BRANT
ENGINEER
No. PE054368E

ANDRASKO & BRANT, INC.
645 EAST PITTSBURGH STREET, #353
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ELIZABETH, PA 15037

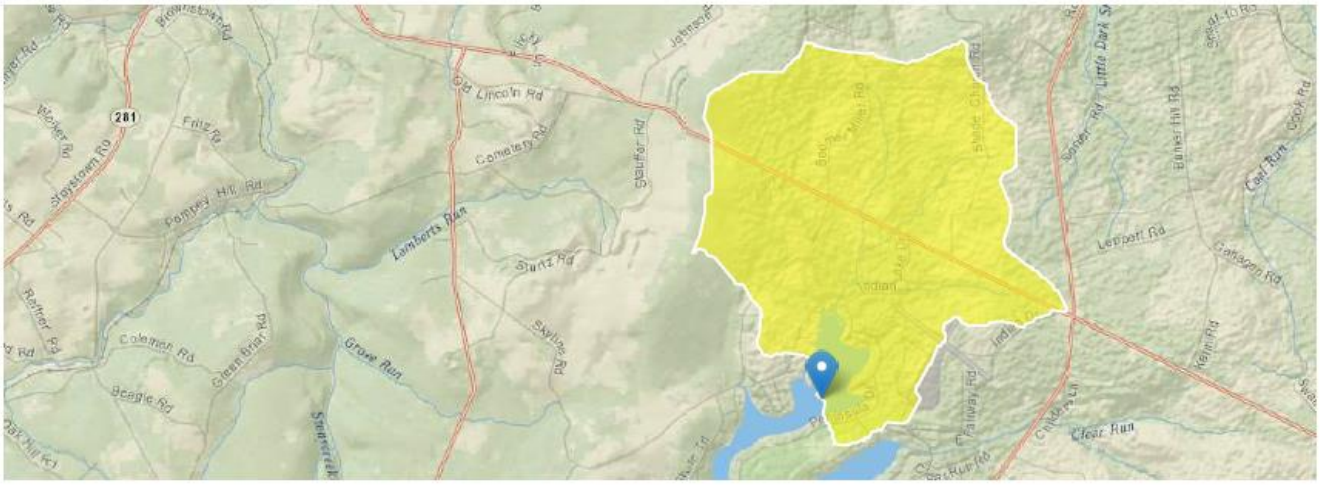
PROJECT
SMALL FLOW TREATMENT FACILITY
INDIAN LAKE BOROUGH, SOMERSET COUNTY

DATE 6.30.2023
SCALE N.T.S.
DRAWING 5347
LAYOUT SFTF 3

SHEET NO.
3-5

## StreamStats Report

**Region ID:** PA
**Workspace ID:** PA20230808191546874000
**Clicked Point (Latitude, Longitude):** 40.04937, -78.86293
**Time:** 2023-08-08 15:16:09 -0400




Collapse All

### Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 5.15 | square miles |
| ELEV | Mean Basin Elevation | 2446 | feet |
| PRECIP | Mean Annual Precipitation | 43 | inches |

### Low-Flow Statistics

#### Low-Flow Statistics Parameters [Low Flow Region 3]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 5.15 | square miles | 2.33 | 1720 |
| ELEV | Mean Basin Elevation | 2446 | feet | 898 | 2700 |
| PRECIP | Mean Annual Precipitation | 43 | inches | 38.7 | 47.9 |

#### Low-Flow Statistics Flow Report [Low Flow Region 3]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SE | ASEp |
|---|---|---|---|---|
| 7 Day 2 Year Low Flow | 0.755 | ft^3/s | 43 | 43 |
| 30 Day 2 Year Low Flow | 1.05 | ft^3/s | 38 | 38 |
| 7 Day 10 Year Low Flow | 0.33 | ft^3/s | 54 | 54 |
| 30 Day 10 Year Low Flow | 0.432 | ft^3/s | 49 | 49 |
| 90 Day 10 Year Low Flow | 0.637 | ft^3/s | 41 | 41 |

*Low-Flow Statistics Citations*

**Stuckey, M.H.,2006, Low–flow, base–flow, and mean–flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**



Application Version: 4.16.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1