pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0267457**
Wastewater Type	**Sewage**	APS ID	**1037819**
Facility Type	**SRSTP**	Authorization ID	**1353014**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Jason E Donaldson**	Facility Name	**Donaldson Residence**
Applicant Address	195 Wilson Street	Facility Address	326 Beaver Dam Road
	Reedsville, PA 17084		Hollidaysburg, PA 16648
Applicant Contact	Jason Donaldson	Facility Contact	Jason Donaldson
Applicant Phone	(814) 686-7105	Facility Phone	(814) 686-7105
Client ID	362677	Site ID	849217
SIC Code	8811	Municipality	Frankstown
SIC Description	Services - Private Households	County	Blair
Date Application Received	May 4, 2021	WQM Required	yes
Date Application Accepted	May 10, 2021	WQM App. No.	0721403

Project Description: This is an application for a new NPDES/WQM permit(s)

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineering Nick Hong (via electronic signature)	May 18, 2021
x		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for Daniel W. Martin	May 18, 2021
x		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	May 18, 2021

Summary of Review

The application submitted by the applicant requests a new NPDES/WQM permit(s) for the Donaldson Residence located at 326 Beaver Dam Road, Hollidaysburg, PA 16648 in Blair County, municipality of Frankstown. The application was received by DEP Southcentral Regional Office (SCRO) on May 4, 2021. The corresponding WQM permit number with this NPDES is 0721403.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, and a description of the facility's receiving waters attainment/non-attainment assessment status. Section 5 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.0005 MGD (500 GPD) treatment facility. The NPDES application has been processed as a Small Flow Treatment Facility due to the type of sewage and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County Planning Commission and Frankstown Township and the notice was received by the parties on August 24, 2020. A planning approval letter was issued by DEP for the facility on April 27, 2021.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be the Frankstown Branch Juniata River. The sequence of receiving streams that the Frankstown Branch Juniata River discharges into are the Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay. The subject site is not subject to the Chesapeake Bay implementation requirements. The receiving water has protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Frankstown Branch Juniata River is a Category 2 stream listed in the 2020 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life and fish consumption. The receiving waters is not subject to a total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

Sludge use and disposal description and location(s): Since this is a new discharger, this is not applicable. Subsequent renewals will address sludge use and disposal.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. 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.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name:	Donaldson Residence
NPDES Permit #	PA0267457
Physical Address:	326 Beaver Dam Road Hollidaysburg, PA 16648
Mailing Address:	195 Wilson Street Reedsville, PA 17084
Contact:	Jason Donaldson Jdon1415@gmail.com
Consultant:	John DeLacio Advanced Treatment, Inc. Delacio.john@gmail.com 724-935-0425

1.2 Permit History

Description of Facility

A Point of First Use (POFU) was conducted by DEP Water Plant Biologists and a summary report was dated for March 3, 2021. Refer to Section 2.2 for a description of the discharge. The POFU report has been enclosed as an attachment.

Permit submittal included the following information.

- NPDES/WQM Application

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 326 Beaver Dam Road, Hollidaysburg, PA 16648. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

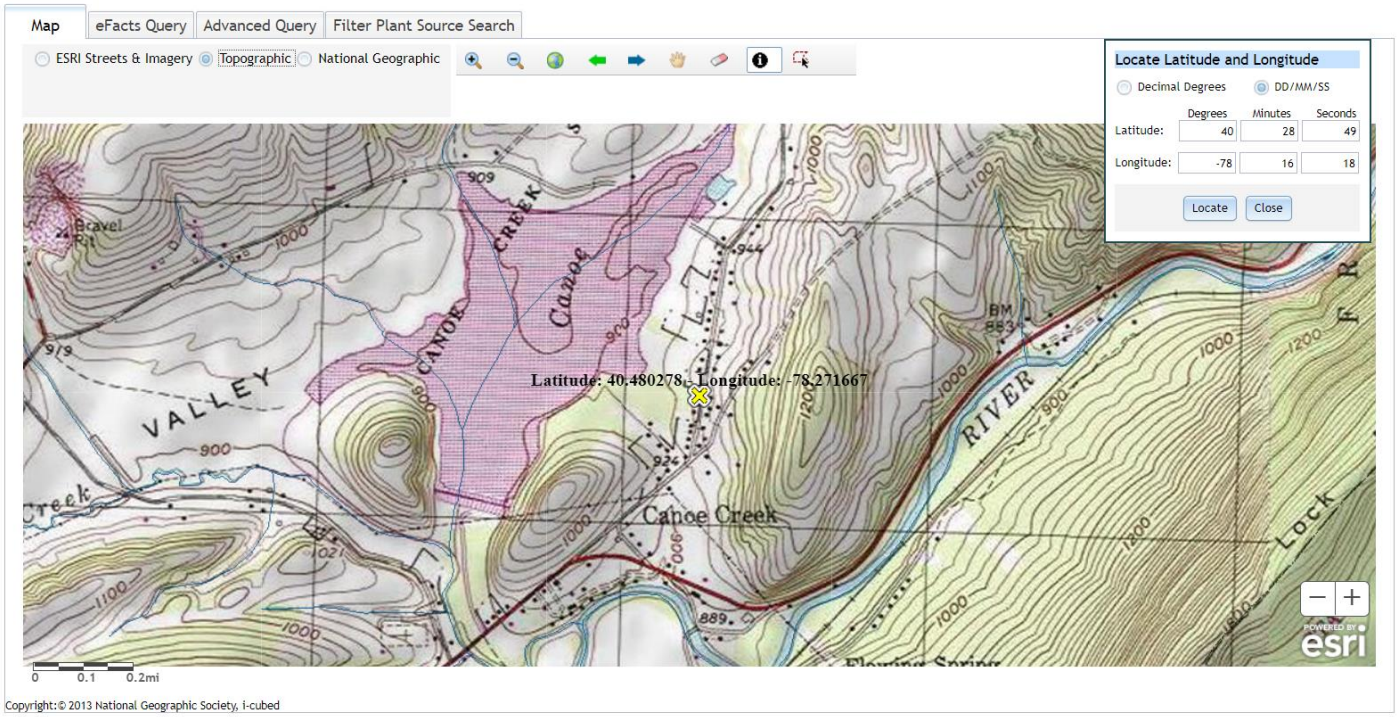
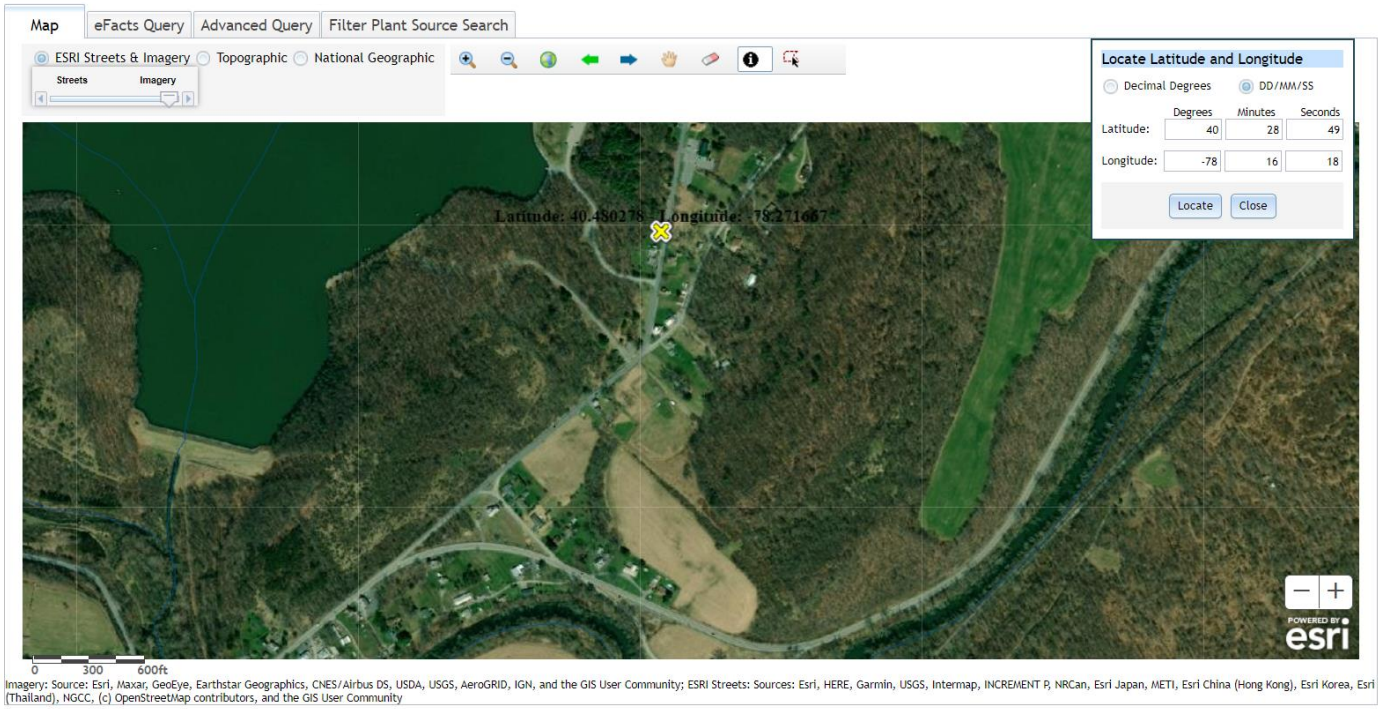


Figure 2: Aerial Photograph of the subject facility



2.2 Description of Wastewater Treatment Process

The subject facility is a 0.0005 MGD (500 GPD) design flow facility.

The proposed discharge will be in a roadside drainage channel in the southwest corner of the property (along Beaver Dam Road) where the open channel flows south along Beaver Dam Road. The maintained roadside channel flows along the roadway through several culverts under Beaver Dam Road and daylights near the Spigelmyer and Cnaoe Creek State Park property line on the south side of Beaver Dam road. The stream is then piped under the Spigelmyer property for an undetermined distance and then daylights in a semi-wooded area between Beaver Dam Road and Route 22- William Penn Highway. There is a well-defined channel at Route 22 which then flows into a large culvert under Route 22. The channel then immediately flows into Frankstown Branch Juniata River on the south side of Route 22 (DEP POFU dated for March 3, 2021).

The subject facility treats wastewater using a 1,500-gal dual compartment septic tank, an effluent filter, a Premier Tech Ecoflo Coco Filter with integrated pump and UV disinfection prior to discharge through the outfall. The facility shall be evaluated for flow, BOD5, TSS, and fecal coliform.

The treatment process is summarized in the table.

Treatment Facility Summary

Treatment Facility Name: SFTF Jason Donaldson

WQM Permit No.	Issuance Date
0721403	TBD

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	ECOFLOW Coco Filter	Ultraviolet	0.0005

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0005		Not Overloaded		

2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001	**Design Flow (MGD)**	.0005
Latitude	40º 28' 49.00"	**Longitude**	-78º 16' 18.00"
Wastewater Description:	Sewage Effluent		

The subject facility outfall is within the vicinity of another sewage/wastewater outfall. The downstream outfall is the Point View Cottage (PA0262153 and PA0262161) which is about 2 miles from the subject facility.

3.0 Receiving Waters and Water Supply Information Detail Summary

3.1 Receiving Waters

The receiving waters has been determined to be the Frankstown Branch Juniata River. The sequence of receiving streams that the Frankstown Branch Juniata River discharges into are the Juniata River and the Susquehanna River which eventually drains into the Chesapeake Bay.

3.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown Municipal Authority (PWS ID #4340008) located approximately 90 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

3.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

3.4 2020 Integrated List of All Waters (303d Listed Streams)

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2020 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 2 waterbody. The surface waters is an attaining stream that supports aquatic life and fish consumption. The designated use has been classified as protected waters for warm water fishes (WWF) and migratory fishes (MF).

3.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The low flow yield and the Q710 for the subject facility was estimated using StreamStats.

At the point of first use, the low flow yield is 0.091 $ft^3/s/mi^2$ and the Q710 is 23.4 ft^3/s.

3.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0005
Latitude	40º 28' 59.36"	Longitude	-78º 16' 38.12"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		

Receiving Waters	Frankstown Branch Juniata River	Stream Code	16061
NHD Com ID	65607838	RMI	24.5
Drainage Area	256	Yield (cfs/mi^2)	0.091
Q_{7-10} Flow (cfs)	23.4	Q_{7-10} Basis	StreamStats
Elevation (ft)	960 ft at facility not at POFU	Slope (ft/ft)	
Watershed No.	11-A	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 Class.	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining for aquatic life		
Cause(s) of Impairment	Not appl.		
Source(s) of Impairment	Not appl.		
TMDL Status	Not appl.	Name	

Background/Ambient Data		Data Source
pH (SU)	Not appl.	
Temperature (°C)	Not appl.	
Hardness (mg/L)	Not appl.	
Other:		

Nearest Downstream Public Water Supply Intake	Mifflintown Municipal Authority		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37	Distance from Outfall (mi)	90

4.0: Overview of Presiding Water Quality Standards

4.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

4.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3).

Small flow treatment facilities are confined to permit limitations promulgated by the Small Flow Treatment Facilities Manual (Document # 36-0300-002) and the SOP- New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application (Revised May 17, 2019). The facility discharges to a roadside drainage channel similar to a dry stream channel. The effluent limits are consistent with the Policy and Procedure for evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers (DEP Document # 391-2000-014).

Since the facility is a single family residence generating a low flow amount of wastewater (500 gpd), the facility will not be required to have monitoring or effluent limits for Total Nitrogen or Phosphorus.

Parameter	Avg Mo	IMAX	Sample Type	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate	1/year
BOD5 (mg/l)	10	20	Grab	1/year
TSS (mg/l)	10	20	Grab	1/year
Fecal Coliform (No/100 ml)	200 Geometric Mean		Grab	1/year

4.3 Water Quality-Based Limitations

The facility is not subject to water quality-based effluent limits.

4.3.1 Water Quality Modeling 7.0

The facility is not subject to WQM.

4.3.2 Toxics Modeling

The facility is not subject to toxics modeling.

4.4 Total Maximum Daily Loading (TMDL)

4.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that

were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

4.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

4.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was December 17, 2019.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant discharger that includes sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

Due the low flow rate generated by the facility, this facility is not subject to Sector C monitoring requirements.

4.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP's guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP's evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

4.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.l.1 and 40 CFR 122.l.2).

Since this is a new discharger, anti-backsliding does not apply. However, future renewals may be subject to anti-backsliding.

5.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit; and
b) a summary of the proposed NPDES effluent limits.

5.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The table is categorized by Conventional Pollutants and Disinfection.

5.1.1 Conventional Pollutants and Disinfection

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection			
Donaldson Residence, PA0267457			
Parameter	**Permit Limitation Required by[1]:**	**Recommendation**	
CBOD	TBEL	Monitoring:	The monitoring frequency shall be 1x/yr as a grab sample (SOP)
		Effluent Limit:	Effluent limits shall not exceed 10 mg/l as an average monthly (SOP)
		Rationale:	The monitoring frequency and the effluent limits assigned by the SOP.
TSS	TBEL	Monitoring:	The monitoring frequency shall be 1x/yr as a grab sample (SOP).
		Effluent Limit:	Effluent limits shall not exceed 10 mg/l as an average monthly (SOP)
		Rationale:	The monitoring frequency and the effluent limits assigned by the SOP.
Fecal Coliform	TBEL	Monitoring:	The monitoring frequency shall be 1x/yr as a grab sample (SOP).
		Effluent Limit:	Effluent limits shall not exceed 200 MPN as a geometric mean (SOP).
		Rationale:	The monitoring frequency and the effluent limits assigned by the SOP.
Notes:			
1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, or (g) WET			
2 Monitoring frequency based on flow rate of 0.0005 MGD.			
3 SOP, New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, Revised January 13, 2015			
4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)			
5 Phase 2 Watershed Implementation Plan Wastewater Supplement, Revised September 6, 2017			

5.3.1 Summary of Proposed NPDES Effluent Limits

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.

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 28' 49.00" , **Longitude** 78° 16' 18.00" , **River Mile Index** 24.5@P OFU , **Stream Code** 16061

Receiving Waters: Frankstown Branch Juniata River

Type of Effluent: Sewage Effluent

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.

2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

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	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	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: New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications, rev 05/17/19*
☐	Other:

Attachment A

Stream Stats

StreamStats Report

Region ID: PA
Workspace ID: PA20210513122736563000
Clicked Point (Latitude, Longitude): 40.47449, -78.27315
Time: 2021-05-13 08:27:54 -0400

Donaldson Residence PA0267457 Modeling Point #1 May 2021

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	256	square miles
PRECIP	Mean Annual Precipitation	40	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	2.07	miles per square mile

Parameter Code	Parameter Description	Value	Unit
ROCKDEP	Depth to rock	4.6	feet
CARBON	Percentage of area of carbonate rock	20.63	percent

Low-Flow Statistics Parameters [99.9 Percent (256 square miles) Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	256	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	40	inches	35	50.4
STRDEN	Stream Density	2.07	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.6	feet	3.32	5.65
CARBON	Percent Carbonate	20.63	percent	0	99

Low-Flow Statistics Flow Report [99.9 Percent (256 square miles) Low Flow Region 2]

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

Statistic	Value	Unit	SE	SEp
7 Day 2 Year Low Flow	39.3	ft^3/s	38	38
30 Day 2 Year Low Flow	48.8	ft^3/s	33	33
7 Day 10 Year Low Flow	23.4	ft^3/s	51	51
30 Day 10 Year Low Flow	28.9	ft^3/s	46	46
90 Day 10 Year Low Flow	38.4	ft^3/s	36	36

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: 4.5.3
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.1

Attachment B

Point of First Use (POFU)

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection

March 3, 2021
Stream Code: 16061
Stream File: 2.23.8

SUBJECT: **Point of First Use Survey**
Frankstown Branch Juniata River
Donaldson SFTF
Frankstown Township, Blair County

TO: **Rick Barrett**
Clean Water Program

FROM: **Andrew Blascovich**
Aquatic Biologist 2
Clean Water Program

As requested, I investigated a proposed discharge point for a proposed small flow treatment facility (SFTF) to a drainage channel that empties into Frankstown Branch Juniata River in Frankstown Township, Blair County. The proposed sewage flow is 500 gallons per day. The property is located at 326 Beaver Dam Road in Hollidaysburg, PA. Access to the property is from Beaver Dam Road. See Figure 1. Donaldson POFU Location Map for the property location.

The Frankstown Branch Juniata River, in this location, has a designated protected use of Warm Water Fishes (WWF) and migratory fishes (MF) under Title 25 of the Pennsylvania Code, Chapter 93. The 2020 integrated water quality monitoring and assessment report indicates this section of the Frankstown Branch is supporting both the Aquatic Life Use and the Fish Consumption Use as of the last assessment.

On 01 March 2021 the subject site was accessed from the residence as previously described. Permission to enter the property followed coordination with the property owner. The plan provided to me does not contain a scale or North arrow. I verified in the field that the proposed discharge will be in a roadside drainage channel in the southwest corner of the property (along Beaver Dam Road) where the open channel flows south along Beaver Dam Road. The maintained roadside channel flows along the roadway, through several road culverts under Beaver Dam Road, and "daylights" near the Spigelmyer and Canoe Creek State Park property line on the south side of Beaver Dam Road. It is then piped under the Spigelmyer property (for an undetermined distance), then "daylights" in a semi-wooded area between Beaver Dam Road and Route 22 (William Penn Highway). There is a well-defined channel at Route 22 which then flows into a large culvert under Route 22. The channel then immediately flows into Frankstown Branch Juniata River on the south side of Route 22.

Surface water was present in the drainage channel at the time of sampling likely due to snow melt and precipitation within the previous 48 hours. The channel in the vicinity of the proposed discharge is clearly a maintained roadside ditch. The channel at Route 22 is well defined and exhibits more of a natural "bed and bank" type stream. I surveyed the channel for

macroinvertebrates at two locations. Figure 2. Donaldson POFU Survey illustrates the location of the proposed discharge, the survey sample locations, and the point of first surface water use.

Sampling for macroinvertebrates was completed using a standard 500 µm mesh kick net. Table 1 shows taxa observed. Water chemistry field data, which was obtained with a YSI ProDSS portable field meter, is shown in Table 2.

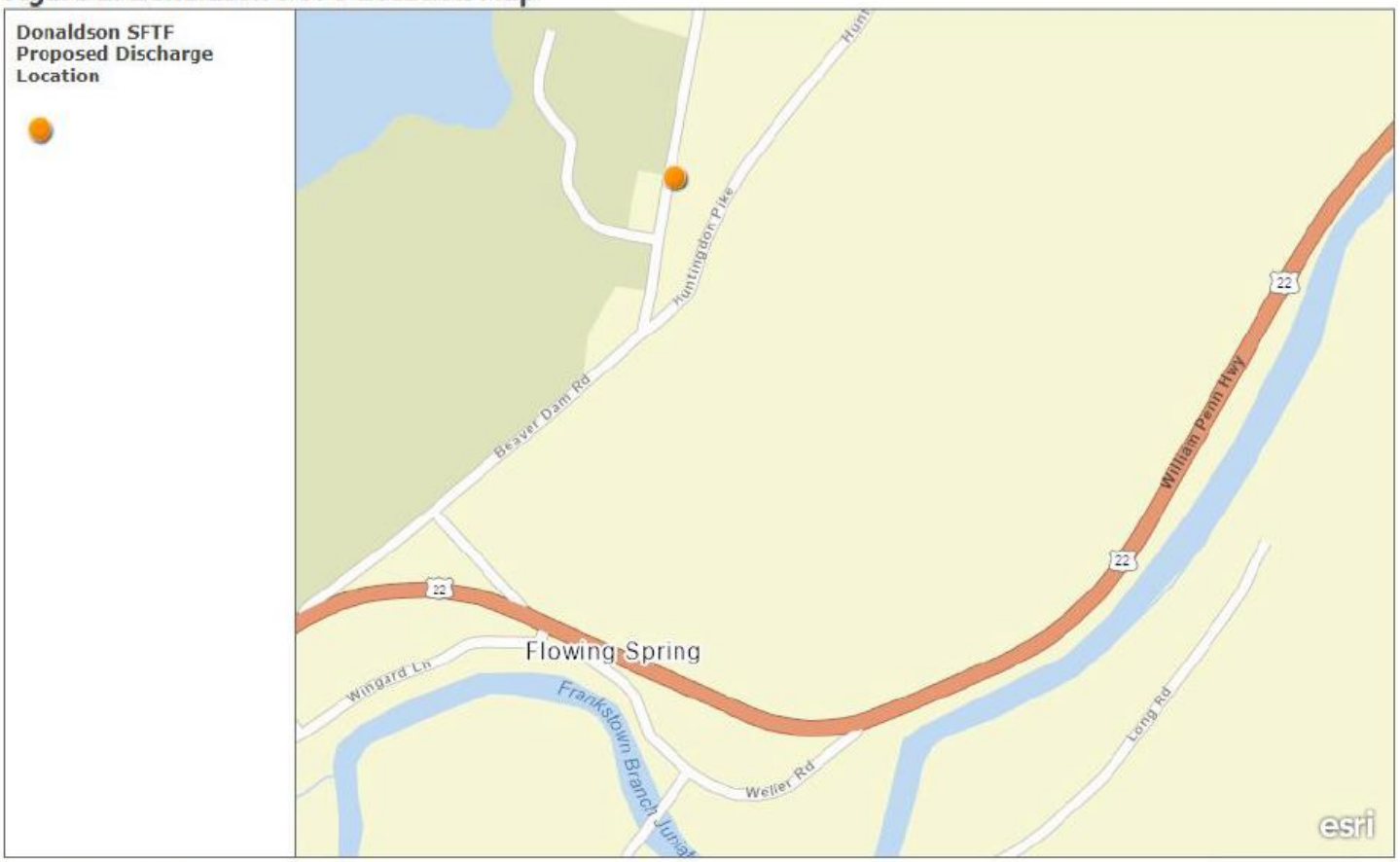
Survey Location 1 is situated about 20 meters downstream of Beaver Dam Road (Frankstown, PA Quadrangle; N: 40.4779, W: -78.2727). The channel had bed and banks, but the substrate consisted primarily of silt/mud. Several kick net attempts resulted in finding only one taxa: Chironomidae.

Survey Location 2 is situated immediately upstream of Route 22 (Frankstown, PA Quadrangle; N: 40.4753, W: -78.2732). There is a well-defined channel in this location with a mixed substrate of sand, silt, gravel, and cobble. Images 1 through 3 depict sampling conditions at Survey Location 2. Several kick net attempts resulted in finding two taxa: Chironomidae and Isopoda.

In summary, there is aquatic life in the channel between Beaver Dam Road and Route 22 (an unnamed tributary (UNT) to Frankstown Branch Juniata River). However, with only two taxa representing the macroinvertebrate community, this UNT is likely an intermittent stream which may not contain surface flow during dry periods. Frankstown Branch Juniata River, on the other hand, is a well-known perennial stream that is capable of and does support an abundant and diverse community of aquatic life. Therefore, it is with my best professional judgement that, the point of first surface water use is in the Frankstown Branch Juniata River.

cc: Tim Wagner
Kristen Bardell

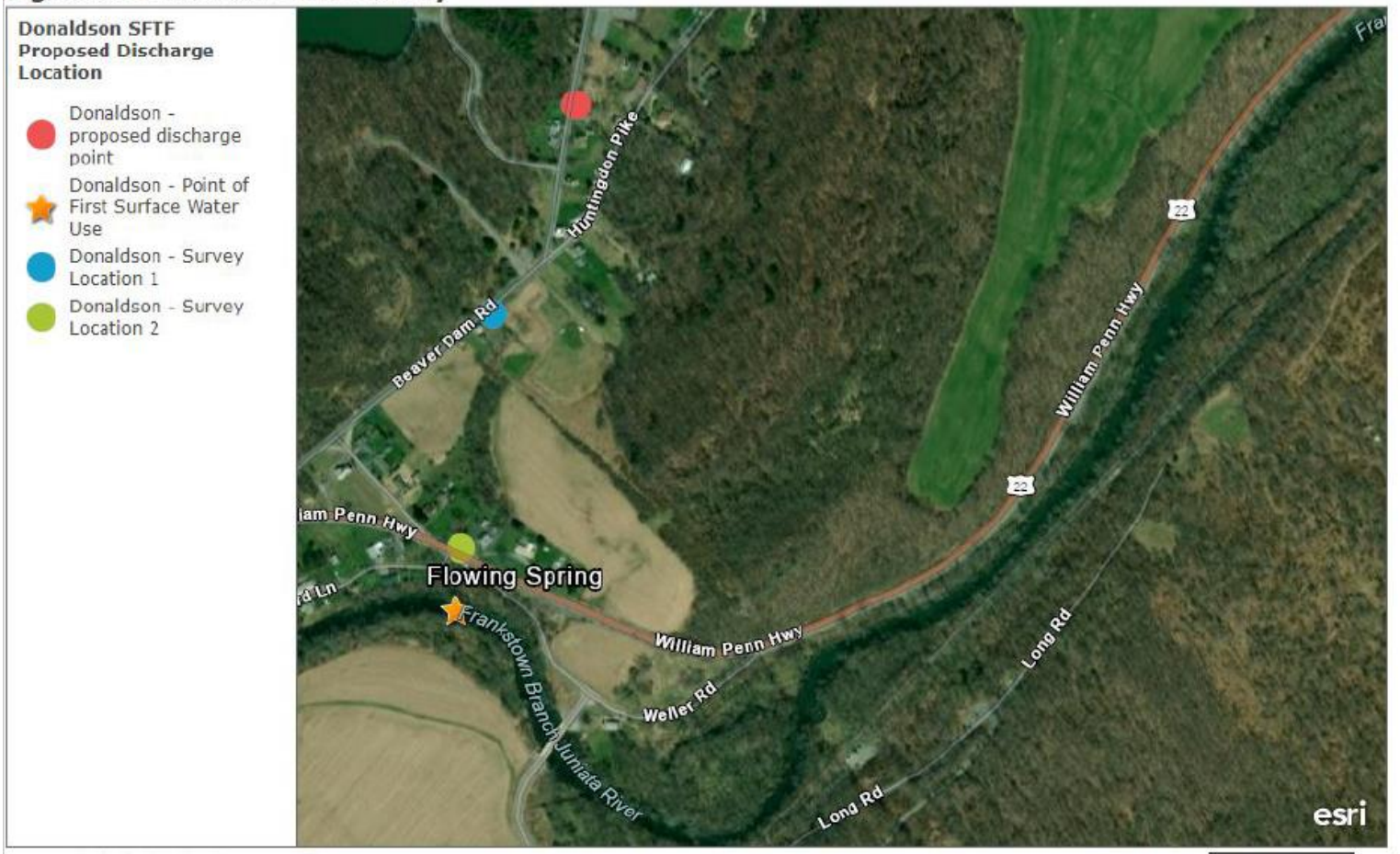
Figure 1. Donaldson POFU Location Map



A map for inclusion in the memo for POFU surveys.

Esri Community Maps Contributors, West Virginia GIS, BuildingFootprintUSA, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Figure 2. Donaldson POFU Survey



A map for inclusion in the memo for POFU surveys.

USDA FSA, Maxar | Esri Community Maps Contributors, West Virginia GIS, BuildingFootprintUSA, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Project: Donaldson POFU, Blair County	Date: 01 March 2021 Photos taken by: A. Blascovich

Image 1: Survey Location 2 facing upstream from Route 22 culvert

Project: Donaldson POFU, Blair County	Date: 01 March 2021 Photos taken by: A. Blascovich

Image 2: Survey Location 2 facing downstream at Route 22 culvert

Image 3: Survey Location 2 – representative channel and substrate – facing upstream

Table 1:
Macroinvertebrates
UNT to Frankstown Branch Juniata River
Survey Location 2

Macroinvertebrate Taxa	*Pollution Tolerance Value*	*Relative Abundance**
Chironomidae	6	A
Isopoda	8	A
Total Number of Taxa: 2		

*VA=Very Abundant (>100), A=Abundant (25-99), C=Common (10-24), P=Present (3-9), R = Rare (<3)

Table 2:
Water Chemistry
UNT to Frankstown Branch Juniata River
Survey Location 2

Field Parameter	*Reading*
Temperature	4.3°C
Dissolved Oxygen	12.18 mg/L / 93.7% sat
pH	7.2
Specific Conductivity	345 µS/cm