Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0222283**
Facility Type	**Municipal**	APS ID	**1118041**
Major / Minor	**Minor**	Authorization ID	**1492692**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Brookville Municipal Authority**	Facility Name	**Corsica Borough STP**
Applicant Address	18 Western Avenue	Facility Address	4147 Summerville Corsica Road
	Brookville, PA 15825-1540		Corsica, PA 15829
Applicant Contact	George Haines	Facility Contact	
Applicant Phone	(814) 849-7941	Facility Phone	
Client ID	85900	Site ID	463807
Ch 94 Load Status	Not Overloaded	Municipality	Corsica Borough
Connection Status	No Limitations	County	Jefferson
Date Application Received	June 26, 2024	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	This is an application to renew an NPDES Permit for a Municipal Minor Sewage Facility that serves Corsica Borough.		

Summary of Review

The limits for this permit renewal will be carried over from the last permit term due to the stream still being considered a "Dead Stream" under 25 PA Code Chapter 95.5, which explains the treatment standards for discharges to waters affected by abandoned-mine drainage.

There are no open violations in WMS for the subject Client ID (85900) as of 5/1/25.

This facility has a backup chlorine disinfection installed in the event of a failure in the UV disinfection unit. There have been no instances since 2012 where they have used the chlorine disinfection. In an email with the consultant the permittees have opted to keep the TRC Limits in place in case they have to use that system.

Sludge use and disposal description and location(s): 2.93 dry tons of sewage sludge is disposed of at Brookville Wastewater Treatment Plant

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		Dustin Hargenrater Dustin Hargenrater / Project Manager	May 1, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	May 5, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.043
Latitude	41º 10' 41.72"	Longitude	-79º 11' 45.36"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Welch Run (CWF)	Stream Code	48486
NHD Com ID	123855775	RMI	0.8800
Drainage Area	0.3	Yield (cfs/mi^2)	0.01 – Dry Stream
Q_{7-10} Flow (cfs)	0.0001	Q_{7-10} Basis	Dry/Intermittent Stream
Elevation (ft)	1532	Slope (ft/ft)	--
Watershed No.	17-C	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, PH		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final	Name	Welch Run Watershed

Background/Ambient Data		Data Source
pH (SU)	7.24	Aquatic Biological Investigation – April 22, 2025
Temperature (°F)	52	Aquatic Biological Investigation – April 22, 2025
Hardness (mg/L)		
Other: Dissolved Oxygen	10.7	Aquatic Biological Investigation – April 22, 2025

Nearest Downstream Public Water Supply Intake		Hawthorn Area Water Authority	
PWS Waters	Redbank Creek	Flow at Intake (cfs)	30.5
PWS RMI	28.0	Distance from Outfall (mi)	17.3

Changes Since Last Permit Issuance: None

Other Comments: Stream assessments have determined that the receiving stream does not support aquatic life. It is not expected that the stream will recover within this next permit cycle.

Treatment Facility Summary

Treatment Facility Name: Corsica Borough STP

WQM Permit No.	Issuance Date
3397404 A-2	January 9, 2018
3397404 T-1	November 21, 2012
3397404 A-1	November 30, 2011

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Extended Aeration	Ultraviolet	0.044

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.044	88	Not Overloaded	Aerobic Digestion	Landfill

Changes Since Last Permit Issuance: None

Other Comments: Aerobic sludge digestion is provided at this facility. Additional sludge treatment may be provided at the Brookville STP where additional aerated sludge digestion, filter press dewatering, and sludge drying beds are available. The reported sludge disposal is through the Brookville Wastewater Treatment Plant and 2.93 dry tons of sewage sludge was sent there in the last year.

Compliance History

DMR Data for Outfall 001 (from April 1, 2024 to March 31, 2025)

Parameter	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24
Flow (MGD) Average Monthly	0.013	0.015	0.011	0.012	0.011	0.010	0.01	0.012	0.01	0.009	0.01	0.022
Flow (MGD) Daily Maximum	0.028	0.046	0.02	0.023	0.019	0.016	0.018	0.017	0.016	0.015	0.015	0.049
pH (S.U.) Instantaneous Minimum	7.2	7.0	7.2	7.1	7.1	7.4	7.6	7.4	7.5	7.3	7.5	7.1
pH (S.U.) Instantaneous Maximum	7.8	7.8	7.9	8.0	7.7	8.0	8.2	8.1	8.2	8.5	8.2	7.8
DO (mg/L) Daily Minimum	9.5	9.4	7.8	9.4	9.4	9.5	8.0	8.4	7.3	7.2	8.1	8.0
TRC (mg/L) Average Monthly	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
TRC (mg/L) Instantaneous Maximum	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG	GG
CBOD5 (lbs/day) Average Monthly	< 0.4	< 0.4	< 0.3	< 0.2	< 3.0	< 0.3	< 0.2	0.5	0.4	< 0.2	0.4	< 1.0
CBOD5 (lbs/day) Weekly Average	< 0.5	0.5	0.6	< 0.3	0.3	0.4	0.2	0.6	0.4	< 0.3	0.5	2.0
CBOD5 (mg/L) Average Monthly	< 3.0	< 4.0	< 3.0	< 3.0	< 4.0	< 3.0	< 3.0	5.0	5.0	< 3.0	5.0	< 3.0
CBOD5 (mg/L) Weekly Average	< 3.0	5.0	4.0	< 3.0	4.0	3.0	3.0	5.0	6.0	< 3.0	5.0	4.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	17	22	11	11	37	21	9	14	14	10	14	15
BOD5 (lbs/day) Raw Sewage Influent Weekly Average	17	22	11	11	37	21	9	14	14	10	14	15
BOD5 (mg/L) Raw Sewage Influent Average Monthly	135	261	162	84	231	280	156	158	189	164	169	95
BOD5 (mg/L) Raw Sewage Influent Weekly Average	135	261	162	84	231	280	156	158	189	164	169	95
TSS (lbs/day) Average Monthly	0.7	0.6	1.0	0.7	0.4	0.5	< 0.2	0.7	0.5	< 0.2	< 0.5	< 10.6
TSS (lbs/day) Raw Sewage Influent Average Monthly	6	246	9	4	38	31	6	15	14	3	19	9
TSS (lbs/day) Raw Sewage Influent Weekly Average	6	246	9	4	38	31	6	15	14	3	19	9

TSS (lbs/day) Weekly Average	1.0	0.9	1.0	0.8	0.5	0.5	< 0.2	1.0	0.5	0.3	0.7	21.0
TSS (mg/L) Average Monthly	5.0	7.0	12.0	9.0	5.0	6.0	< 3.0	7.0	6.0	< 3.0	< 6.0	< 27.0
TSS (mg/L) Raw Sewage Influent Average Monthly	48	21	142	34	240	410	111	168	188	56	228	56
TSS (mg/L) Raw Sewage Influent Weekly Average	48	21	142	34	240	410	111	168	188	56	228	56
TSS (mg/L) Weekly Average	6.0	11.0	16.0	10.0	7.0	6.0	< 3.0	11.0	7.0	3.0	8.0	51.0
Fecal Coliform (No./100 ml) Geometric Mean	4.00	< 1.00	20.00	2.00	< 10	8.00	< 3.00	< 5.0	6.00	< 1.0	< 1.00	< 15.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	14.00	1.00	35.00	3.00	99.00	60.00	8.00	24.0	7.00	< 1.0	< 1.00	223.0
UV Intensity (µw/cm²) Average Monthly	7085	6942	8385	5507	8946	9538	22738	10569	11179	14000	8757	6846
Total Nitrogen (mg/L) Semi-Annual Average				7.67						7.26		
Ammonia (lbs/day) Average Monthly	< 0.01	0.02	0.02	< 0.01	< 0.008	< 0.01	< 0.007	< 0.05	< 0.1	< 0.03	0.05	< 0.07
Ammonia (mg/L) Average Monthly	< 0.12	0.2	0.31	< 0.14	< 0.11	< 0.1	< 0.11	< 0.48	< 1.2	< 0.42	0.55	< 0.2
Total Phosphorus (mg/L) Semi-Annual Average				5.79						4.98		
Total Aluminum (mg/L) Semi-Annual Average				< 0.10						< 0.10		
Total Iron (mg/L) Semi-Annual Average				0.04						0.06		
Total Manganese (mg/L) Semi-Annual Average				< 0.02						< 0.02		

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .043
Latitude 41º 10' 41.40" **Longitude** -79º 11' 46.25"
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)

Comments: Based on 25 PA Code Chapter 95.5 treatment requirements for sewage discharges to waters affected by abandon mine drainage shall be subject to secondary treatment standards. Waters affected by abandon mine drainage is defined as waters that the applicable water quality criteria are not being met and designated water uses are not being achieved to the extent that aquatic communities are essentially excluded, and where the pollution cannot be remedied by controlling known, active discharges. Joe Brancato, one of the Clean Water Programs aquatic biologists, did an investigation at the stream on April 22, 2025, to verify that the stream would still be considered affected by abandoned-mine drainage. His conclusion was that Welch Run is still very heavily affected by AMD which was verified by significant metal staining, low diversity and population of aquatic communities, and reduction of available habitat for these communities. Secondary treatment standards will be applied as the effluent limits for this renewal as the stream is not expected to recover within the next permit term. For the purpose of maintaining the record the Aquatic Biological Investigation will be attached as Attachment 1.

Based on the SOP for Individual Sewage Applications pH, D.O. and TRC parameters will be subject to daily monitoring. In an email with the permittees' consultant the facility should be able to comply with daily monitoring of these three parameters. Since UV transmittance is not a parameter listed on Table 6-3 of the Permit Writers Manual it will match the monitoring frequency of TRC due to UV being the primary disinfection at the facility.

Based on the SOP for Establishing Effluent Limitations in Individual Sewage Permits, sewage discharges with design flows >2000 GPD will include monitoring at a minimum for Total Nitrogen and Total Phosphorous in new and reissued permits with a monitoring frequency equivalent to conventional pollutants in Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations (Permit Writer's Manual) where the facility discharges to nutrient-impaired waters, or a lesser frequency for discharges to waters not impaired for nutrients. The monitoring frequency has been matched to the Table 6-3 "Self-Monitoring Requirements for Sewage Discharges" conventional pollutants for this renewal.

Water Quality-Based Limitations

There is currently a finalized TMDL for Welch Run, this TMDL does not directly recognize and designate WLAs to the specific discharges in the watershed but instead sets WLAs at points where there are changes to the stream (e.g. tributaries entering the stream). Waste Load Allocations for the WR12 segment of Welch Run identified in the TMDL are Total Aluminum: Concentration 0.31 mg/l Load 1.0 lbs/day, Total Iron Concentration 0.44 mg/l Load 1.4 lbs/day, Total Manganese Concentration 0.42 mg/l Load 1.3 lbs/day, Acid Concentration 5.06 mg/l Load 15.7 lbs/day. Based on the monitoring data collected by the facility there was only one instance in the last permit term where they discharged Total Iron that was above the value allocated to them in the TMDL at 1.47 mg/l. Semi-annual monitoring will be continued to monitor the requirements of the TMDL for Total Iron, Total Aluminum, and Total Manganese.

Due to the stream classification and language in 25 PA Code Chapter 95.5 it is not normally necessary to model the receiving stream in cases where the stream is not expected to recover within the next permit term.

Anti-Backsliding

N/A

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	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 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	1/day	Grab
CBOD5	8.9	14.0	XXX	25.0	40.0	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/month	8-Hr Composite
TSS	10.7	16.0	XXX	30.0	45.0	60	2/month	8-Hr Composite
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
UV Intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	3	XXX	XXX	8.5	XXX	17	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Aluminum	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	2/year	8-Hr Composite
Total Iron	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	2/year	8-Hr Composite
Total Manganese	XXX	XXX	XXX	Report SEMI AVG	XXX	XXX	2/year	8-Hr Composite

Compliance Sampling Location: Outfall 001, after disinfection.

Attachment 1
Aquatic Biological Investigation – April 22, 2025

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMO

TO Justin Dickey
Environmental Engineer Manager
Clean Water Program

FROM Joe Brancato
Aquatic Biologist Supervisor
Clean Water Program

THROUGH Eric Kicher
Environmental Group Manager
Clean Water Program

DATE April 22, 2025

RE Aquatic Biological Investigation
Corsica Borough STP
NPDES Permit No. PA0222283
Welch Run (SC 48486)
Corsica Borough, Jefferson County

INTRODUCTION

At the request of the Clean Water Program, an aquatic biological investigation was completed on Welch Run, Corsica Borough, Jefferson County on April 21, 2025. The survey was conducted to determine if Welch Run (Stream Code 48486) should still be classified as an abandoned mine drainage stream for discharge treatment requirements as described in 25 Pennsylvania Code §95.5. This regulation is for waste discharged to waters polluted by abandoned coal mine drainage where water quality criteria are not being met and designated water uses are not being achieved to the extent the aquatic communities are essentially excluded. For sewage discharges under §95.5(a)(1), only secondary treatment is required for discharges to these types of waters. Under §95.5(b)(1)(2), a greater degree of treatment would be required when (1) the water quality of the receiving water has or is expected to improve significantly or (2) the minimum degree of treatment required would cause pollution to downstream waters, so that designated stream uses in these downstream waters would not be achieved.

Corsica Borough Sewage Treatment Plant (STP) currently discharges treated municipal sanitary sewer wastes into Welch Run and operates under NPDES Permit No. PA0222283. Two stations on Welch Run were evaluated for the potential of viable aquatic life and impacts of abandoned mine drainage.

Welch Run originates within the Borough of Corsica, Jefferson County. The stream travels primarily south until its confluence with Redbank Creek at the Village of Summerville. Welch Run drains approximately 4.24 square miles and is designated for Cold-Water Fishes (CWF) as defined in the Pennsylvania Code, Title 25, Chapter 93, Water Quality Standards, Drainage List S. Welch Run is in

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State Water Plan (SWP) 17C and Hydrologic Unit Code (HUC) 05010006. Welch Run contains approximately 4.53 stream miles, of which the entire length is listed on the most recent Integrated Waterbody Report as impaired for Acid Mine Drainage (AMD) as the source and pH and metals as the cause.

METHODS

On April 21, 2025, benthic macroinvertebrates were examined at two stations on Welch Run. Using a kick net and downstream kicks at two riffle locations per station, organisms were attempted to be collected in the net. A viewing pan was used to locate organisms on the netting. Once found the organisms were collected and identified to the lowest taxonomic level possible in the field. Basic water quality measurements were also examined. Basic water quality parameters included temperature, dissolved oxygen, pH and specific conductance. Benthic macroinvertebrates were collected and examined just upstream of the STP outfall location (Photograph 1) and another station approximately 50-meters downstream of the outfall location (Photograph 2). Water quality parameters were measured at the two stations where benthic macroinvertebrates were collected in addition to the outfall location and another pipe just a few meters downstream that appeared to be discharging AMD laden water (Photographs 3 and 4).

RESULTS

At the upstream station just above the STP outfall, Welsh Run had riffle, run and pool habitat. The immediate riparian area was forested. The water was clear and stream bottom substrate was embedded with sand, silt and iron precipitate. Cobble and gravel substrate was also present, and the underside of rocks were black. These conditions are typical of streams impacted by AMD and could hinder aquatic life. Basic water quality measurements collected included: temperature (11.2° C), pH (7.24 S.U.), specific conductance (484 µS/cm) and dissolved oxygen (10.17 mg/L). The two kick net benthic macroinvertebrate samples taken at this station resulted in four (4) benthic macroinvertebrate taxonomic groups which included two Dipteran taxa in low abundance (Chironomidae and *Tipula*), a single Hydropsychid caddisfly and a single crayfish.

Water quality measurements were collected at the STP outfall pipe and the AMD outfall pipe. The STP outfall pipe was flowing with clear water and dark green filamentous algal growth appeared in the ditch from the outfall pipe which led to Welch Run, indicating some organic enrichment (i.e. phosphorus and nitrogen). Basic water quality measurements collected included: temperature (11.5° C), pH (7.33 S.U.), specific conductance (500 µS/cm) and dissolved oxygen (8.97 mg/L). The AMD outfall pipe appeared to be discharging iron laden water based on appearance with orange water and significant iron substrate and staining in a small ditch from the pipe to Welch Run. When the water entered Welch Run, it changed the appearance of this receiving stream as the stream bottom substrate was embedded and all substrate was covered with bright orange iron precipitate. Basic water quality measurements collected included: temperature (10.6° C), pH (5.98 S.U.), specific conductance (775 µS/cm) and dissolved oxygen (7.50 mg/L).

At the downstream station, approximately 50-meters below the STP outfall, Welsh Run had riffle, run and pool habitat. The immediate riparian area was forested. The water was clear and stream bottom substrate was embedded with sand, silt and iron precipitate. Cobble and gravel substrate was also present, and the underside of rocks were black. These conditions are typical of streams impacted by AMD and would hinder aquatic life. Basic water quality measurements collected included: temperature (11.8° C), pH (6.72 S.U.), specific conductance (529 µS/cm) and dissolved oxygen (9.72 mg/L). The two kick net macroinvertebrate samples taken at this station resulted in a single *Tipula* collected.

DISSCUSION AND CONCLUSION

The purpose of the aquatic biological investigation was to determine if Welch Run should still be classified as an AMD stream for discharge treatment requirements as described in 25 Pennsylvania Code §95.5. The investigation conducted on April 21, 2025, concluded that the area above, at, and below the Corsica Borough STP is still heavily affected by AMD. Substantial fine particulate embeddedness and significant metal staining are all signs of AMD impacts that are very much still prevalent in Welch Run. The kick net benthic macroinvertebrate sampling that yielded very low abundance and diversity and confirmed that the conditions caused by AMD are still present and are drastically affecting the macroinvertebrate community. The reduction of available habitat and significant abundance of metals are the greatest harm to the macroinvertebrate community in Welch Run. Conditions upstream of the STP outfall location are slightly better but still significantly impaired with slightly decreased metal staining, water quality and at least a few benthic macroinvertebrate taxa when compared to downstream of the outfall location. Currently, the treatment processes occurring at the Corsica Borough STP are not having a discernable impact on the receiving stream. Under §95.5 regulations, secondary treatment at the Corsica Borough STP will have no impact on Welch Run and water quality of the receiving water has no expectation to improve significantly in the immediate future and the current treatment allowed in the current permit will not cause additional pollution to downstream waters.

cc: Stream File- Welch Run (SC 48486)
Dustin Hargenrater, Civil Engineer, Clean Water Program

Photograph 1. Welch Run, Corsica Borough, Jefferson County, just upstream of the Corsica STP outfall location.

Photograph 2. Welch Run, Corsica Borough, Jefferson County, just downstream of the Corsica STP outfall location.

Photograph 3. Corsica Borough outfall pipe location (black arrow) and abandoned mine drainage pipe (red arrow) which leads to Welch Run, Corsica Borough, Jefferson County.

Photograph 4. Welch Run, Corsica Borough, Jefferson County, where Corsica STP outfall and AMD outfall enter the receiving stream.