STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-G33	**Crossing Start Date:** 11/26/2023	**Crossing Completion Date:** 12/08/2023
Milepost: 202.7	**Pre-Con Assessment Date:** 11/18/2023	**Post-Con Assessment Date:** 12/08/2023
Station: 10712+73	**Stream Classification:** Perennial **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 8
County: Giles	**303(d) Impairment Listing:** Not Impaired	**Riffle:Pool Complexes Present?** No

Item #	Resource Crossing Conditions	N/A	YES	NO
1.	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? N/A Fish Relocation? Yes Mussel Relocation? N/A		X	
2.	Is this resource designated a wild or stockable trout stream?			X
3.	Which crossing methods were utilized during the stream crossing? *(Select one or more)* Dam & Pump, Flume, Cofferdam, Conventional Bore, Horizontal Directional Drill (HDD) Bore?	Dam & Pump		
4.	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?		X	
5.	Was excess material not needed for backfill removed and disposed of in an upland area?		X	
6.	Was the top 12-inches of backfill made with clean native stream substrate?		X	
7.	Was the pre-construction survey data provided and utilized during restoration in attempt to re-establish pre-construction contours?		X	
8.	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?			X
9.	Were impervious trench breakers/plugs properly installed within 25-feet of top-of-bank to prevent subsurface erosion to or from the resource area?		X	
10.	Was permanent seed and stabilization material (straw or matting) applied to riparian areas and stream banks prior to re-establishing flow to the impact area of the channel?		X	
11.	Was the time of disturbance minimized by conducting resource work continuously to completion?		X	
12.	Have civil surveys been scheduled to verify as-built conditions meet pre-construction conditions in accordance with the project Mitigation Framework and federal/state permit requirements?		X	
13.	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30)?	X		
14.	Did any unauthorized discharges to unpermitted resources occur during the crossing? If so, explain the corrective actions implemented in the Comments section and include additional photos.			X

Item #	Biological Conditions	Pre-Con	Post-Con
15.	**Predominant Substrate Type (select one):** *Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay*	Cobble (2-10")	Cobble (2-10")
16.	**Channel Conditions:** **Rating:** *1-Optimal (80-100% stable banks), 2-Suboptimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks)*	3 - Marginal	1 - Optimal
17.	**Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank:** **Rating:** *1-Optimal (60-100% heavy vegetative cover), 2-Suboptimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)*	3 - Marginal	3 - Marginal
18.	**Instream Habitat Conditions:** **Examples:** *Varied substrate sizes, varied combination of water velocities/depths, presence of woody/leafy debris, stable substrate with low amount of mobile particles, low embeddedness, shade protection, undercut banks, root mats, submerged aquatic vegetation.* **Rating:** *1-Optimal (Habitat conditions present in >50% of resource), 2-Suboptimal (Habitat conditions in 30-50% of resource), 3-Marginal (Habitat conditions in 10-30% of resource), 4-Poor (Habitat conditions in 0-10% of resource)*	4 - Poor	4 - Poor
19.	**Channel Alterations:** **Examples:** *Straightened channel, non-MVP stream crossings, non-native riprap/rock along banks, concrete/gabions/concrete block, manmade embankments, constrictions w/in channel, livestock or agricultural impacts.* **Rating:** *1-Negligible (unaltered/natural stream), 2-Minor (20-40% of resource disrupted by channel alterations), 3-Moderate (40-80% of resource disrupted), 4-Severe (>80% of resource disrupted)*	1 - Negligible	1 - Negligible

Comments/Remarks

11/18/23- The pre-construction meeting was held, and the pre-construction assessment was completed. The dewatering structure is located on the ROW. The MVP EI is Curt Kamman. -D. Coleman

11/26/23- The dams and pumps were installed with the energy dissipater located downstream. The stream substrate was excavated and placed in super sacks. The topsoil was excavated, segregated, and stabilized. Excavation of the trench began. -D. Coleman

11/27/23- Rock hammering began. The dewatering structure was functioning as designed. No impact to biological conditions was observed. -D. Coleman

11/28/23- A retaining wall was constructed on the Coming In Side (CIS) of the resource to prevent sloughing from the adjacent man-made pond. Blast crews prepared and set blast zones. Controls were installed. No impact to biological resources was observed. -D. Coleman

11/29/23- Blast crews prepared for blasting. The trench was blasted in the early afternoon. No impact to biological conditions was observed. -D. Coleman

11/30/23- The trench was excavated after blasting activities. Due to the blasting activities, the retaining wall destabilized. The wall is under assessment to be rebuilt. No impact to biological conditions was observed. -D. Coleman

12/1/23- Retaining wall was reinforced and is now functioning as intended. The trench excavation was completed. Heavier precipitation began around noon and construction activities have slowed. Pumps and hoses are on standby to be used if needed in the resource. No impact to biological conditions was observed. -D. Coleman

12/3/23- Welding began on the first sections of the pipe. The adjacent pond structure was reinforced to prevent sloughing into the trench. -A. Breeding

12/4/23- Construction continued. Welding, x-ray, media blasting and coating continued throughout the day. No impact to biological conditions were observed. Environmental controls remain on standby. -D. Coleman

12/5/23- Welding continued and coating application began. Awaiting subsoil restoration and trench breaker construction. Resource pumps, hoses and dewatering structure remain on standby. No impact to biological conditions was observed. -D. Coleman

12/6/23- Welding and coating finished in the morning. Water was pumped out of the trench in preparation for trench breaker construction. The trench breaker was installed on the CIS of the resource. The dewatering structure was functioning as designed. -D. Coleman

12/7/23- Trench breakers were installed, and resource reconstruction commenced. Subsoil was deposited and resource final contour staking was documented. Awaiting placement of substrate and construction of the 50-foot buffer zones. Work concluded and resource reconstruction will resume tomorrow morning, 12/8. No impact to biological conditions were observed. Pumps and hoses remain on standby. -D. Coleman

12/8/23- Stream restoration resumed. Substrate was deposited. Stream contours were staked and set to within 1/10th of an inch of the original channel conditions. Segregated topsoil was deposited around the resource, seed and straw mulch was applied. The 50-foot buffer zones were seeded, strawed, and filter socks were installed 10-feet from the top of the resource banks. Erosion control matting was installed on the right and left banks of the resource. Stabilization controls were installed, and the stream has been restored. The post-construction assessment has been completed. -D. Coleman

No impacts to biological conditions were observed during the crossing activity.

In accordance with the Mountain Valley Pipeline Consent Decree, Case No. CL18006874-00, (Issued October 11, 2019) this independent report was completed to document the on-site monitoring of instream invertebrate and fisheries resources during all construction activity related to waterbody and wetland crossings, and document instream conditions and any impacts to the resources.

This report was written by	DAVID T COLEMAN *Print Name*	 *Signature*	12/11/2023 *Date*

Required Photos

STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

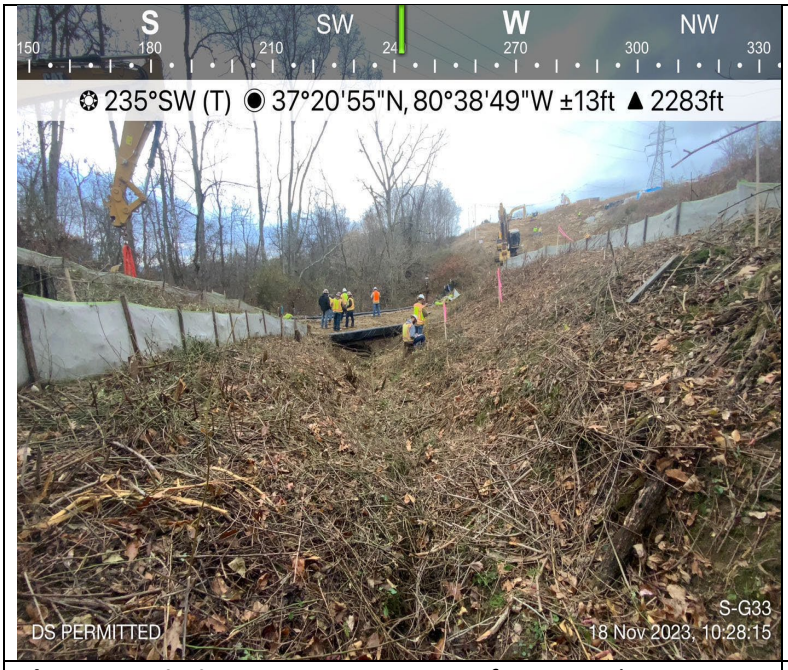

Photo Description: Downstream view of permitted impact area during pre-construction assessment.

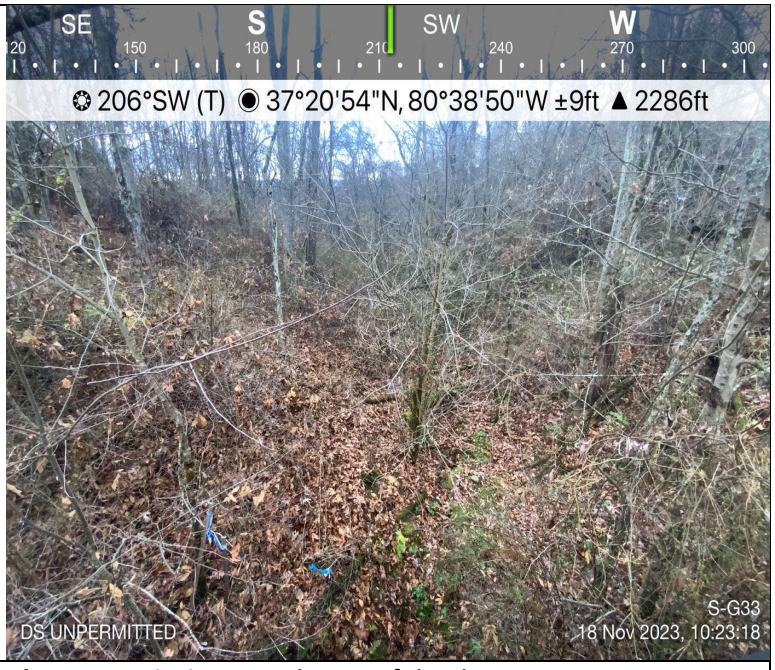

Photo Description: Conditions of the downstream area outside the ROW during pre-construction assessment.

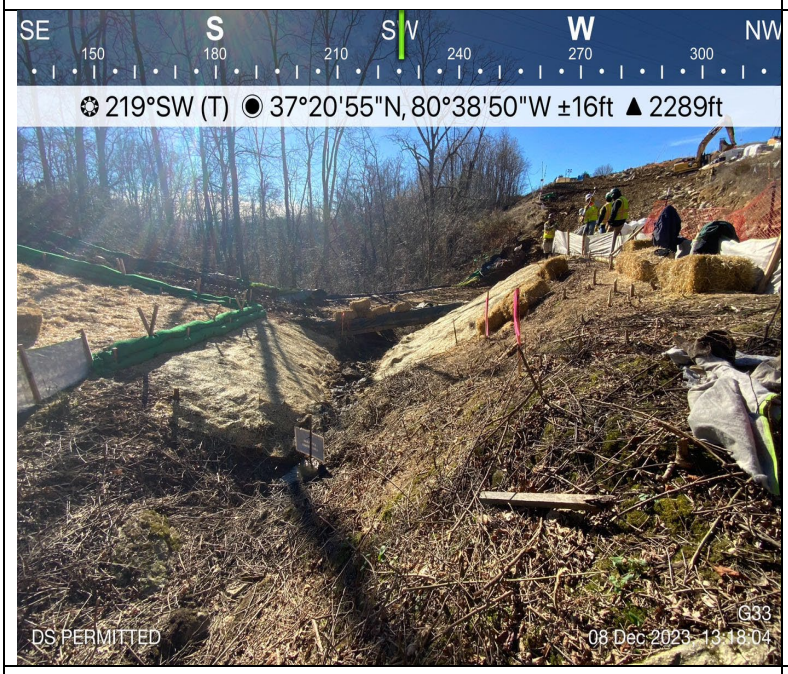

Photo Description: Downstream view of permitted impact area during post-construction assessment.

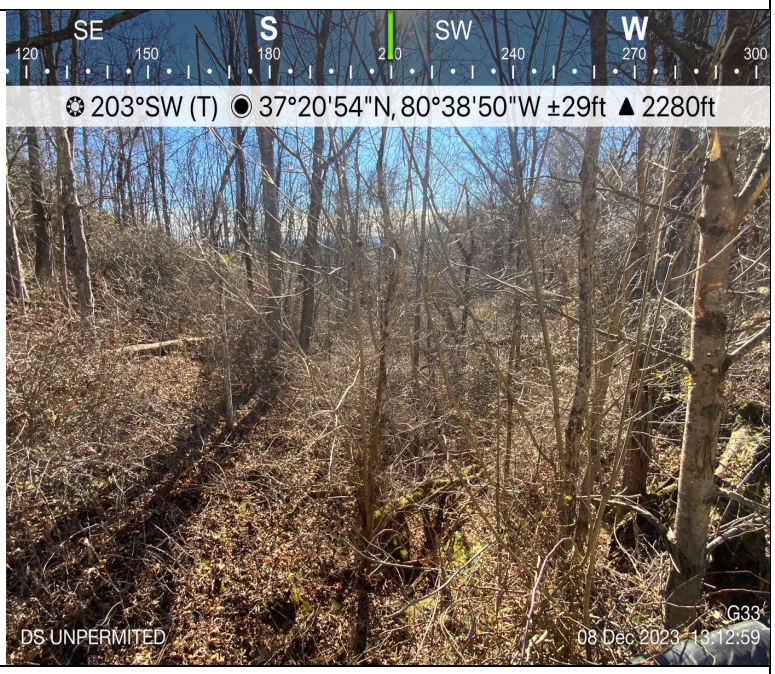

Photo Description: Conditions of the downstream area outside the ROW during post-construction assessment.

Optional Additional Photos

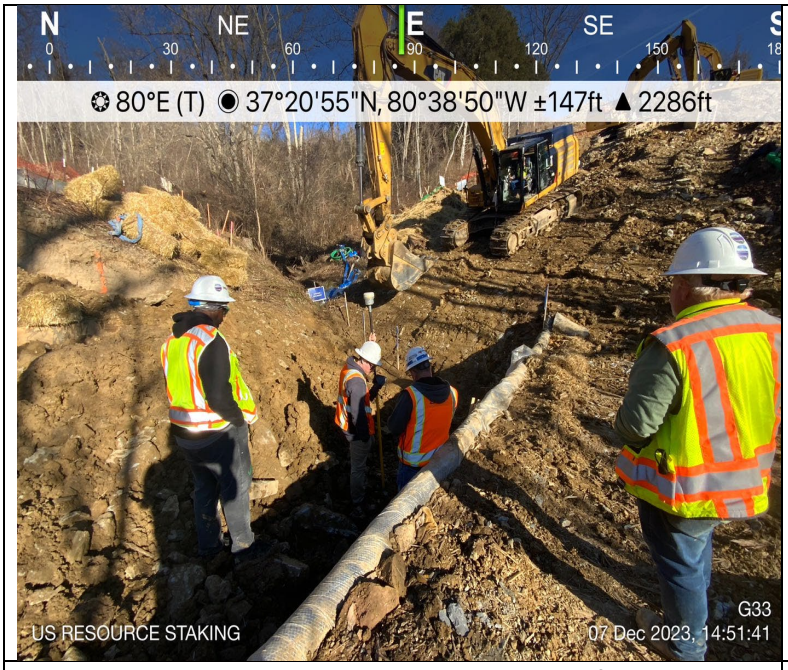

Photo Description: The survey team conducting final contouring of the stream.

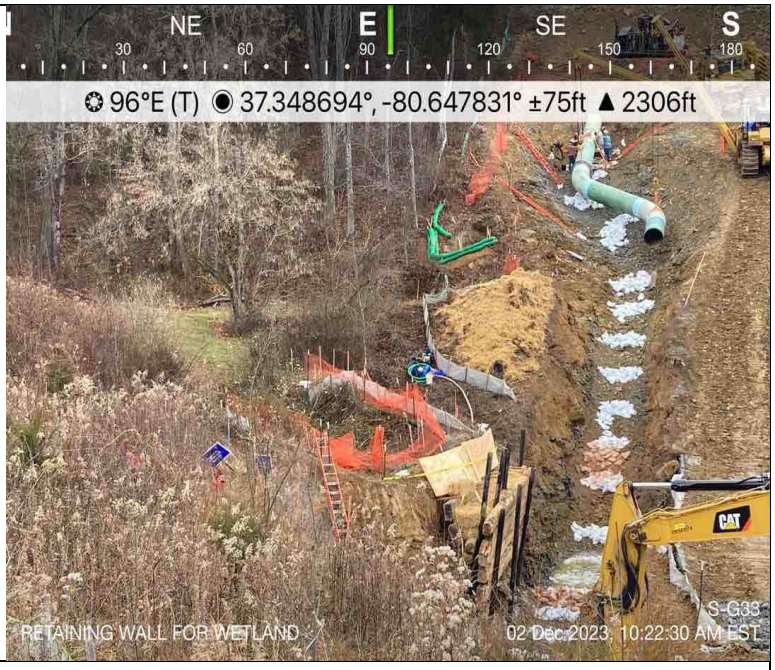

Photo Description: A retaining wall was constructed to prevent sloughing of the adjacent manmade pond into the resource.

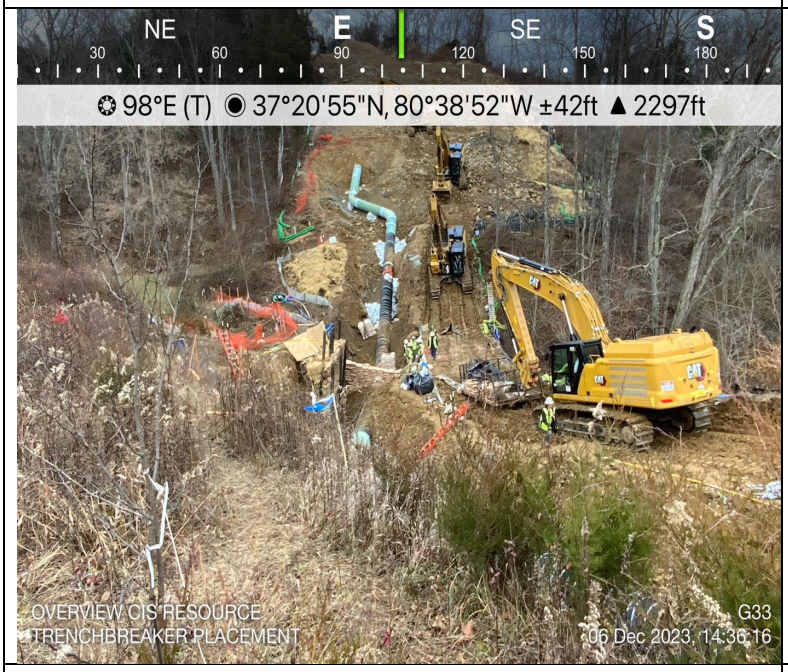

Photo Description: Trench breakers were installed within 25-feet from the top of bank.

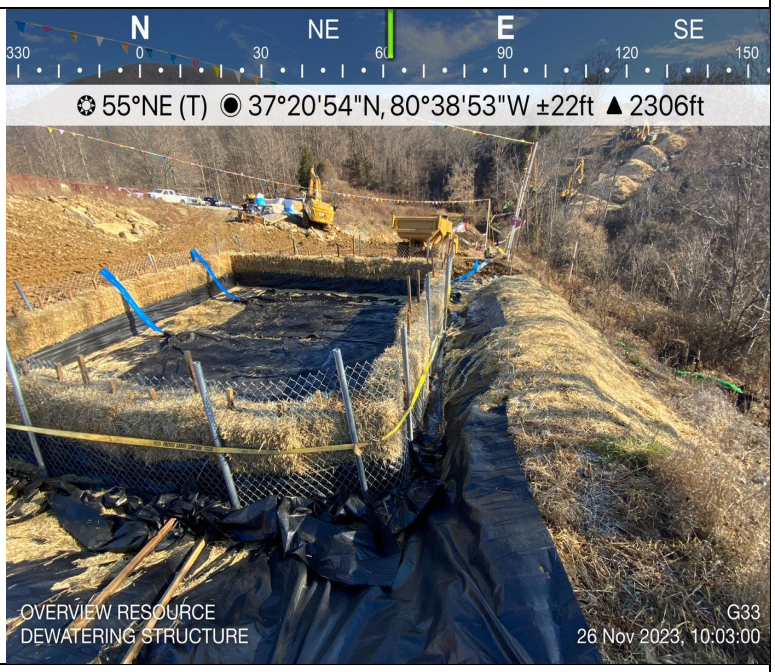

Photo Description: Dewatering structure located within the LOD.