STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-OO13	**Crossing Start Date:** 10/17/2023	**Crossing Completion Date:** 10/26/2023
Milepost: 216.7	**Pre-Con Assessment Date:** 10/16/2023	**Post-Con Assessment Date:** 10/27/2023
Station: 11451+28	**Stream Classification:** Perennial **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 20
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)*	1 - Optimal	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)*	2 - Suboptimal	2 - Suboptimal
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

08/24/2023- Pre-construction meeting held. Scour mitigation method record on stream 15.4 feet unless bedrock. The dewatering structure will be off ROW with the landowner's permission. MVP EI on-site is Mindy Lou Metcalf. -A. Breeding

10/16/2023- Pre-construction meeting held. Pre-assessment complete. Fish relocation was on-site, and relocation has been completed. -A. Breeding

10/17/2023- Dam and pump around installed. Energy dissipator installed. Bell-hole was excavated in the buffer zone between S-OO12 and S-OO13. The upland topsoil was properly segregated and stabilized. -A. Breeding

10/18/2023- Welding began on the first section of pipe. The excavation of topsoil in the buffer zones is complete. Soil was segregated and stabilized. -A. Breeding

10/19/2023- Stream substrate and soils were segregated and stabilized where appropriate. Trenching began for scour mitigation plan of 16.9 feet coverage. Subsoils were relayed upslope. A variance was received to work until 11 pm due to impending weather which would potentially cause trench sloughing and loss of depth coverage. The second section of pipe was transported to the site and welding began. -A. Breeding

10/20/2023- Rain out. Crew members remain on the site to maintain the dam and pump around. No other work was conducted. -A. Breeding

10/21/2023- Padding and backfill in the upland areas. Trench breakers were installed. Padding of the pipe continued within buffer areas. -A. Breeding

10/22/2023- Padding of the pipe and backfill of the trench continue. -A. Breeding

10/23/2023- Topsoil restoration in the 10-foot buffer. Proper seeding and straw applied with ECM installation. Final contouring of stream was completed, and the substrate was restored.
Item #8: A modification was made to the cross-section B top bank point. A tree stump that was previously in place was removed with the excess material. The bank would be lost if soil layering on top of bank were to continue. -A. Breeding

10/24/2023- Buffer left open for tie in. -A. Breeding

10/25/2023- Buffer left open for tie in. -A. Breeding

10/26/2023- Top soil restoration to the 50-foot buffer. Proper seeding and straw mulch were applied with ECM installation. -C. Stanley

No impact to biological conditions or unauthorized discharge, were observed during the crossing activities.

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	Allie Breeding *Print Name*	 *Signature*	10/27/2023 *Date*

Required Photos

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: Dewatering structure located off ROW with landowner permission and shared with OO12.

Photo Description: Survey staking out final contours.

Photo Description: Dam and pump around installed.

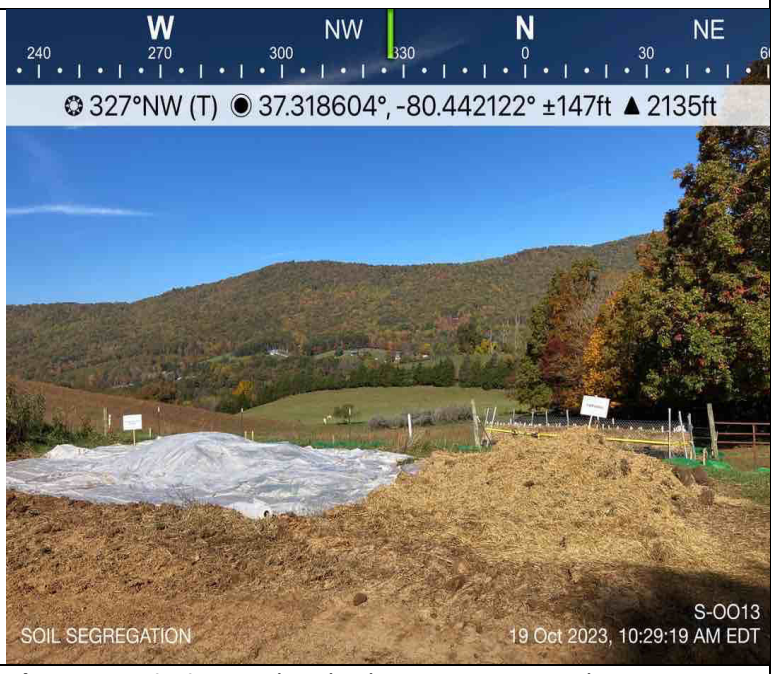

Photo Description: Soil and substrate segregated appropriately.