STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-H13	**Crossing Start Date:** 11/01/2023	**Crossing Completion Date:** 11/04/2023
Milepost: 290.5	**Pre-Con Assessment Date:** 10/24/2023	**Post-Con Assessment Date:** 11/04/2023
Station: 15347+11	**Stream Classification:** Perennial **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 20
County: Pittsylvania	**303(d) Impairment Listing:** Not Impaired	**Riffle:Pool Complexes Present?** Yes

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-Sub-optimal (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	2 - Suboptimal
17.	**Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank:** **Rating:** *1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)*	2 - Suboptimal	2 - Suboptimal
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

10-24-2023: Pre-construction meeting and auditor assessment. The Precision foreman is C. Dennis, and the MVP EI is G. Morrow. This resource is being crossed in conjunction with W-H5. -K. Douglas

10-25-2023: Site preparation is beginning in the upland areas. The resource crossing is anticipated to begin later in the week. -K. Douglas

10-26-2023: The dewatering structure and pump locations were established. The crossing is anticipated to begin on Monday, 10-30-2023. -K. Douglas

10-27 to 10-30-2023: No activity within the resource, and fish relocation tentatively scheduled for Wednesday, 11-1-2023. -B. Fennell

11-1-2023: Stream resource crossing activities have begun. The topsoil and subsoils were excavated, separated, and stockpiled according to the plans. Active trenching and pipe preparation were underway. A section of pipe was lowered into the trench and a rock shield was installed. Welding activities are ongoing. The trench was dewatered as necessary. Additional rock hammering occurred to obtain the appropriate depth for the trench. In the afternoon, additional sections of pipe were transported and set into the padded trench. Welding began. -B. Fennell

11-2-2023: Welding was completed on the CIS and GAS. The welds were QA/QCed, sandblasted and coated. The CIS trench boxes were installed within 25-feet of the stream and the GAS trench boxes were installed within 25-feet of the wetland. The pipe was padded. -G. Aceves

11-3-2023: The crew completed backfilling the subsoil for the stream. The bank on the CIS was sloped 3:1 to make the stream banks as stable as possible. The top 12-inches of topsoil was replaced inside of the 10-foot buffer. The top 12-inches of stream substrate was replaced and contoured for final grade. The survey crew staked out the toe and thalweg for the stream elevation. The banks inside of the 10-foot buffer were seeded with a permanent riparian mix. Heavy duty stabilization matting was installed, and flow was restored. -G. Aceves

11-4-2023: Backfilled topsoil to applied to wetland W-H5, survey as-built for restoration, wetland seed and mulch applied. Post-construction auditor assessment completed. -G. Aceves

No unauthorized discharges or 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	George Aceves		11/06/2023
	Print Name	*Signature*	*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.

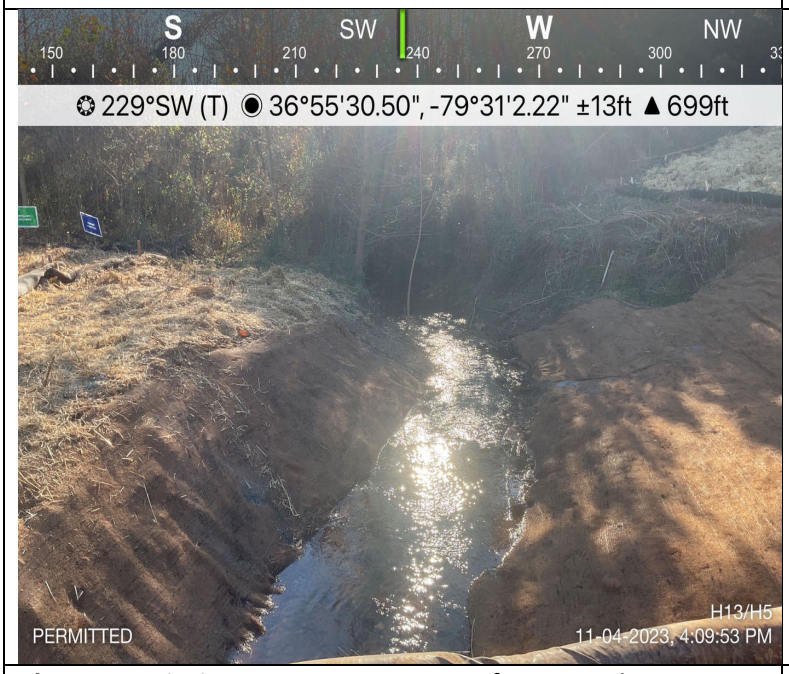

Photo Description: Downstream view of permitted impact area during post-construction assessment.

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

Optional Additional Photos

Photo Description: Topsoil stockpiled separately and stabilized.

Photo Description: Dewatering structure installed for throughout crossing.

Photo Description: Upstream dam installed and functional throughout crossing.

Photo Description: Energy dissipation for pump around