STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-GH15	**Crossing Start Date:** 11/04/2023	**Crossing Completion Date:** 11/09/2023
Milepost: 252.1	**Pre-Con Assessment Date:** 10/23/2023	**Post-Con Assessment Date:** 11/10/2023
Station: 13321+47	**Stream Classification:** Intermittent **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 4
County: Franklin	**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? N/A 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?	Flume, 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*	Mud/Silt/Clay	Mud/Silt/Clay
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)*	2 - Suboptimal	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)*	3 - Marginal	3 - Marginal
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

10/23/2023 Pre-con meeting and auditor assessment. EI is Austin. Dewatering structure is already established and in place. It's a open cut in the dry, and crews are determining what crossing method they will use, dam and pump or flume. Soils will be segregated and stockpiled according to site conditions and workspace requirements. Anticipated start date is Monday 10/30.

11/03/2023 - Construction scheduled for 11/04. - M. Vierra

11/04/2023 - Upstream/Downstream sandbag dams installed. Topsoil/Substrate was stripped, stockpiled separately, and covered with erosion control matting. Trench dug & flume installed. Dewatering pumps installed for water management throughout crossing. - M. Vierra

11/06/2023 - Trench excavation continued. Pipe section staged for installation. QC performed on pipe. - M. Vierra

11/07/2023 - Pipe section lowered in trench. Pipe welding/QC/coating performed. Flume re-installed for overnight stream flow management. - M. Vierra

11/08/2023 - Trenchbreakers were installed, and the trench was backfilled with subsoil. Final restoration is scheduled for tomorrow. - M. Vierra

11/09/2023 - Beginning of final restoration. Topsoil applied in buffer zones. During application, groundwater started to emerge in resource area; an additional pump was installed to mitigate the inflow before topsoil application continued. Super silt fencing was installed as protection at the edge of the 10ft buffer zone on the CIS. Stream substrate was restored to the resource area. Topographical measurements were taken to ensure proper elevation gradient was maintained from pre-construction. Upland seed mix applied in upland area on the CIS. Upstream/Downstream dams were removed. Riparian seed mix applied within resource area buffer zones, and erosion control matting applied in upland area on the CIS. Super silt fence was installed in upland area on the GAS. Erosion control matting applied within 10ft buffer zone on both sides of resource. Upland seed mix applied in upland area on the GAS. Erosion control matting applied in upland area on the GAS. Final restoration complete and post construction auditor assessment scheduled for tomorrow.

11/10/2023 - Post-Con auditor assessment completed. - M. Vierra

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	Matthew Vierra *Print Name*	 *Signature*	11/10/2023 *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.

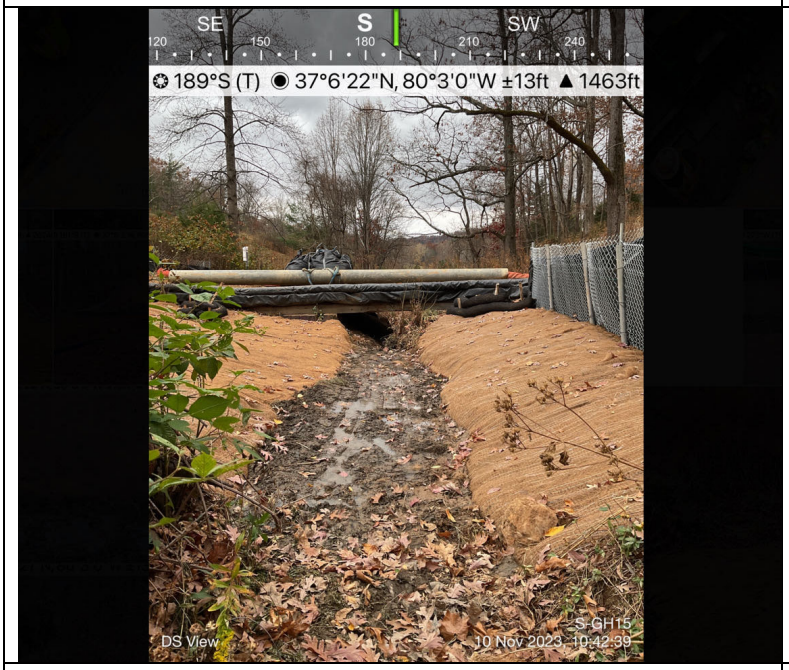

Photo Description: Downstream view of permitted impact area during post-construction assessment.

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

Optional Additional Photos

Photo Description: Soil Segregation - Substrate under erosion control matting.

Photo Description: Dewatering structure on-site throughout crossing.

Photo Description: Survey on-site assisting with restoration.

Photo Description: Erosion control matting Installed in buffer zones.