STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-D11	**Crossing Start Date:** 01/15/2024	**Crossing Completion Date:** 01/19/2024
Milepost: 249	**Pre-Con Assessment Date:** 12/29/2024	**Post-Con Assessment Date:** 01/19/2024
Station: 13157+22	**Stream Classification:** Perennial **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 10
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? 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*	Boulder (>10")	Boulder (>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)*	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-Suboptimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)*	1 - Optimal	1 - Optimal
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

9/30/23- The pre-construction meeting was conducted. The MVP EI is Drew Enter and the Precision Pipeline foreman is Jefferson Bruning. Construction is estimated to begin on the bore pits on Monday, 10/2/23. The pre-construction assessment was completed. -S. Manzo

10/01/23-Construction has begun. The topsoil was stripped from the 50-foot buffer and a test hole was excavated on the Coming In Side (CIS). -S. Manzo

10/2/23-Began excavating the bore pit. -S. Manzo

10/3/23-Continued excavating bore pit and installed a trench box. -S. Manzo

10/4/23-Installed the pump for the bore pit and began construction the second trench box. -S. Manzo

10/5/23- Completed construction of the second trench box. -S. Manzo

10/6/23- Due to large boulders that were encountered while excavating the bore pit, the MVP Environmental is coordinating to change the permits to an open cut crossing. -S. Manzo

12/29/23- A new pre-construction assessment and meeting was completed. The MVP EI onsite is James Simmons. 6-inch pumps were ordered to control the stream flow. Fish relocation will be required prior to the start of construction. Boulder and cobble will be sacked and segregated for restoration. Steep bank on the Going Away Side (G.A.S.) will be compacted with native soil and rock outside of the 10-foot buffer for added stability to the bank and driveway that is located inside of the 50-foot buffer. -S. Frost

12/30/23- No work was conducted in the buffer area. Trenching was completed outside of the 50-foot buffer on the C.I.S. Pipe was installed and welded outside of the buffer area. Visqueen was draped over the edge of the bridge to prevent dirt from entering the stream. No impacts to the biological conditions were observed. - S. Frost

12/31/23- X-ray was completed outside of 50-foot buffer. The backfill of the subsoil began outside of the 50-foot buffer. Preparing for fish relocation and the dam and pump installation which has been scheduled for Tuesday, 01/02/24. No impacts to the biological conditions were observed. -S. Frost

01/02/24- Fish relocation occurred on 01/01/24. The upstream and downstream fish nets were installed and left in place. The upstream and downstream dams were completed. Two 3-inch electric pumps were installed upstream and pumped around downstream to an energy dissipater. Backup pumps and generators were brought onsite. Preparation began inside of the 50- and 10-foot buffer. Work is anticipated to begin tomorrow, 1/3/24. No impacts to the biological conditions were observed. -S. Frost

01/03/24- The 3-inch pumps will be exchanged for 6-inch pumps. Hoses for two 6-inch pumps run from upstream to around and under the timber mats outside of buffer area, to the downstream energy dissipaters. An elevated dirt pad was constructed outside the 50-foot buffer for the large generators that the 6-inch pump requires. No impacts to the biological conditions were observed. - S. Frost

01/04/24- A test hole was dug outside of the 50-foot buffer to determine how much rock will be anticipated during construction. Large boulders were removed and relocated to an upland area. The test hole was backfilled and leveled out. No impacts to the biological conditions were observed. - S. Frost

01/05/24- Due to the anticipated rain/snow event, environmental preparations were made to the work site. Pipe welding in the upland area outside of the buffer area was completed. No impacts to the biological conditions were observed. -S. Frost

01/06/24- A rain out was called. No work other than pump watch was conducted on the work site. - S. Frost

01/07/24- Pumps and dams were removed due to crew demobilization. A new crew is being mobilized to the site to start and

complete the stream crossing. A new pre-construction meeting will need to be held and a second fish relocation conducted. No impacts to the biological conditions were observed. - S. Frost

01/08/24- No work was conducted in the buffer area. Demobilization began. - S. Frost

01/09/24- Rain out. No work in the buffer area. - S. Frost

01/10/24- Rain out. No work in the buffer area. - S. Frost

01/11/24- Mobilization of the new crew began. The pre-construction meeting set has been set for 2:00 pm. New EI on-site is Chris Seymour. Biological conditions remain stable. - S. Frost

01/12/24- No work was conducted in the buffer area. - S. Frost

01/13/24- No work was conducted in the buffer area. The fish relocation was scheduled for 01/14/24. - S. Frost

01/14/24- The fish relocation was completed. No fish were found. The nets were installed and left in place. Upstream dams and pumps were installed. The downstream dam and energy dissipater were installed. Topsoil and substrate excavation is scheduled to begin on 01/15/24. - S. Frost

01/15/24- Topsoil and stream substrate was excavated, segregated, and stabilized in an upland area on timber mats and geotech. Downstream flow remains consistent and biological conditions remain stable. - S. Frost

01/16/24- Trenching continues. Subsoil was relayed to an upland area and stockpiled. Pipe was installed in the trench and the first weld began on the CIS. The weld did not pass the x-ray and will be repaired on Wednesday, 01/17/24. Downstream flow remains consistent and biological conditions remain stable. - S. Frost

01/17/24- The second weld was completed. The weld was x-rayed and quality controlled. Trench breakers were installed, and the subsoil was partially backfilled. Downstream flow remains consistent and biological conditions remain stable. -S. Frost

01/18/24- Subsoil backfill continues. Stream restoration will begin on Friday, 01/19/24. Downstream flow remains consistent and biological conditions remain stable. - S. Frost

01/19/24- Subsoil backfill was completed. Survey shot grade for topsoil and substrate restoration. The stream banks were restored, and 12-inches of topsoil was added. Stream substrate was restored with 12-inches of boulder/cobble mix. Survey shot final grade. Seed was applied. Stabilization matting and erosion control devices were installed. The upstream and downstream dams, pumps, and energy dissipater were removed, and flow was restored. The post-construction assessment was completed. No unauthorized discharges were observed or reported during construction. - S. Frost

No impacts 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	Summer Frost		01/22/2024
	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: An overview of the dewatering structure.

Photo Description: Stream substrate segregation in an upland area on timber mats and geotech. Substrate was stabilized with Kerlex.

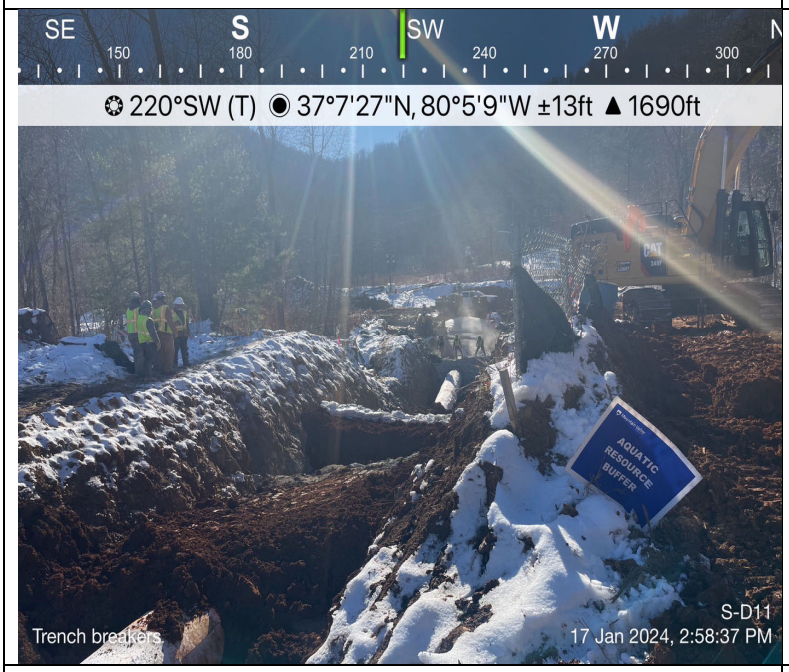

Photo Description: Trench breakers installed on both sides of the resource.

Photo Description: Survey shooting final grade after restoration of the stream substrate.