STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-IJ2	**Crossing Start Date:** 10/10/2023	**Crossing Completion Date:** 12/08/2023
Milepost: 253.9	**Pre-Con Assessment Date:** 10/02/2023	**Post-Con Assessment Date:** 12/09/2023
Station: 13413+65	**Stream Classification:** Intermittent **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 2.5
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?	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-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)*	4 - Poor	3 - Marginal
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.)*	2 - Suboptimal	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)*	3 - Marginal	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

7/10/23: The original timber mat bridge crossing was scheduled. -C. VanEeckhout

7/11/23: Timber mat replacement began, and work continued until 7/13/23. Work was stalled due to wet conditions on 7/14/23. -C. VanEeckhout

MVP EI for this crossing is Matt Futkos, the Precision Pipeline foremen was Jake King (from 10/2-10/23), Sam Grey (from 10/23-11/20), and "Box" (from 11/20-12/8).

10/2/23: The Pre-Con meeting was held, and the pre-construction assessment was conducted. -S. Manzo

10/9/23: The dam & pump and energy dissipater were installed. -S. Frost

10/10/23: The top 12-inches of stream bed material was removed, segregated from trench spoils, and covered. Drilling of the rock began in preparation for blasting. The dewatering structure was constructed properly and is ready for use. -S. Frost

10/11/23: Blasting within the resource area was completed. Hammering rock began in preparation for extending the trench. -A. Thorpe

10/12/23: Hammering continued. Water was pumped from the trench pit and the dewatering structure continued to function properly. A. Thorpe

10/13/23: Rock hammering and excavation of the trench pit continued. The dewatering structure is functioning properly. -A. Thorpe

10/14/23: A section of pipe was lowered into the pit and welding began. -A. Thorpe

10/16/23: Coating and QA/QC was completed. The next trench box was installed. -A. Thorpe

10/17/23: The impervious trench breaker on the Coming In Side (for S-IJ3 and W-IJ2) was installed. Excavation of the trench pit then began in W-IJ1 and S-IJ2. -A. Thorpe

10/18/23: Excavation within the resource area continued. Hammering and drilling were implemented to break through the rock. -A. Thorpe

10/19/23: Excavation continued. -A. Thorpe

10/20/23: Construction activity was halted due to adverse weather. -A. Thorpe

10/21/23: Hammering, drilling, and excavation of the trench pit continued. -A. Thorpe

10/22/23: Excavation continued. The area was prepared for blasting. -A. Thorpe

10/23/23: Blasting was completed. Hammering and excavation continued until the trench was completely

excavated. The pipe was lowered into the trench and welding began. -A. Thorpe

10/24/23: Welding was completed, and QA/QC began. -A. Thorpe

10/25/23: The weld was sandblasted and coated. The impervious trench breaker on the Going Away Side for S-IJ2 & W-IJ1 was installed. The Coming In Side trench breaker will be installed at a later time. The crew began backfilling the trench. -A. Thorpe

10/26/23: Backfilling continued. The Pre-construction meeting for S-IJ1 was held. -A. Thorpe

10/27/23: Backfilling continued. -A. Thorpe

10/28/23: Construction activities have begun at the S-IJ1 crossing. -A. Thorpe

10/30/23: A trench box was installed and the stream bed of S-IJ1 was blasted. -A. Thorpe

10/31/23: The upland buffer zone of S-IJ1 was blasted. -A. Thorpe

11/01/23: The crew began hammering rock in the trench pit to continue excavation. -A. Thorpe

11/02/23: Continued excavation and drilling rock in the trench pit. -A. Thorpe

11/03/23: Drilling continued. -A. Thorpe

11/04/23: Drilling continued. -A. Thorpe

11/06/23: Excavation of trench pit and rock hammering continued. An additional trench box was installed, and the next section of pipe was prepared for installation. -A. Thorpe

11/07/23: Excavation continued at S-IJ1. The dewatering structure and the dam and pump continued to function properly. -A. Thorpe

11/08/23: The next section of pipe was lowered into the trench, but the engineering on the bend was wrong and the pipe did not fit. -A. Thorpe

11/09/23: The crew completed Erosion & Sediment (E&S) tasks and prepared for the upcoming rain. The crew also began repairing the engineering error in the pipe section. -A Thorpe

11/10/23: The crew continued to repair the engineering error in the pipe section. The dewatering structure was functioning properly. The crew prepared to excavate the upland trench. -A. Thorpe

11/11/23: The pipe repair continued along with QA/QC and rock shielding. Preparation continued in the upland trench area. -A. Thorpe

11/13/23: The pipe repair continued as well as hammering rock in the trench pit. -A. Thorpe

11/14/23: The pipe was lowered into the trench and welding began. The weld was QA/QCed. -A. Thorpe

11/15/23: QA/QC continued, and an upland pipe section was lowered into the trench further upslope. -A. Thorpe

11/16/23: The final adjustments were made for the pipe to be QA/QCed. The remainder of the upland trench was excavated and prepared to lower in the final tie in section. -A. Thorpe

11/17/23: The final section of pipe was lowered into the trench and welding began. -A. Thorpe

11/18/23: The final tie in weld was completed. -A. Bailey

11/20/23: Subsequent QA/QC began and the crew prepared for the upcoming rain. -A. Thorpe

11/21/23-11/23/23: Work was halted for 2 rain days and the Thanksgiving Holiday. -A. Thorpe

11/24/23: Continued QA/QC of the final welds. The new Precision Pipeline foreman is “Box,” and the MVP EI is still Matt Futkos. -A. Thorpe

11/25/23: Construction began on the trench breaker located on the Coming In Side with bentonite bags. -A. Thorpe

11/26/23: Trench breaker construction continued, along with padding the trench. The Coming In Side trench breaker was completed. Both trench breakers have now been fully constructed (GAS TB was built on 10/25/23). -A. Thorpe

11/27/23: Padding of the trench continued and an upland trench box was removed. In the late afternoon, one of the Morookas malfunctioned, reversed off the timber mat bridge, and fell into the downstream bed of S-IJ1 on the trench pit side (within the ROW). No immediate negative downstream impacts were observed (see S-IJ1 report for additional details). The crew began backfilling the trench. -A. Thorpe

11/28/23: The Morooka was removed, and the area was cleaned. No negative impacts to the resource were observed. -A. Thorpe

11/29/23: The final trench box was removed, and the crew began backfilling the trench. -A. Thorpe

11/30/23: Final restoration of S-IJ1 has been completed. The crew prepared to restore S-IJ2 & W-IJ1 by backfilling the area with subsoil. -A. Thorpe

12/1/23: Survey staked the subsoil to grade the top of bank and the wetland boundary. The top 12-inches of clean native wetland (W-IJ1) topsoil was then placed within the boundary and survey verified the grade. The top 12-inches of stream (S-IJ2) fill was native stream substrate and survey verified the grade. The downstream dam was deconstructed, and the stream banks were seeded and curlexed. The wetland topsoil was raked, seeded, and strawed. CFS were placed along the wetland boundaries. The CIS 50-foot buffer was seeded and strawed. -A. Thorpe

12/2/23: E&S work was completed to prepare for the upcoming rain. The post construction assessment was conducted. Pictures will be taken as soon as the bridge and buffer zones are cleared of excess material. -A. Thorpe

12/4/23: Topsoil was restored, seed and straw mulch was applied to the GAS 50-foot buffer zone. Materials remained on the bridge and in the buffer zone. -A. Thorpe

12/5/23: The CIS 50-foot buffer for S-IJ1 was seeded and curlexed. Excess E&S materials and empty sacks from restoration remain so the post con photos for S-IJ2 and W-IJ1 could not yet be taken. -A. Thorpe

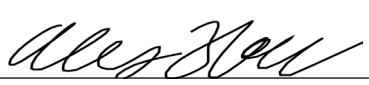
12/6/23: Post construction photos were not able to be taken. According to the crew, the materials are being used in other areas and there is no word on when they will be moved. -A. Thorpe

12/7/23: Materials remain on the bridge and in the buffer zone. -A. Thorpe

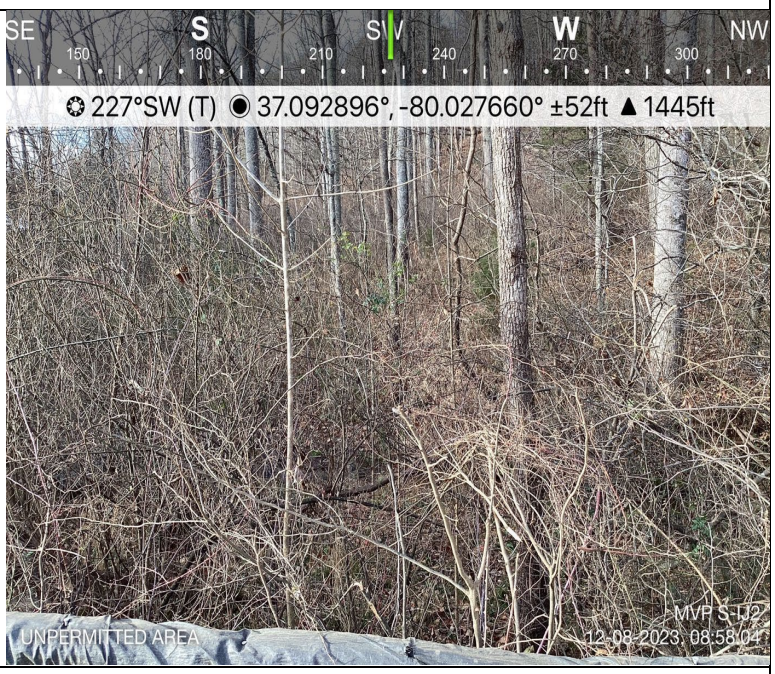
12/8/23: Materials were moved outside the buffer zone. Post construction photos were taken. -A. Thorpe

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	Alessandra Thorpe *Print Name*	 *Signature*	12/09/2023 *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: The upstream rock shield after installation.

Photo Description: The dam and pump was installed and is functioning as designed.

Photo Description: The Going Away Side trench breaker after installation.

Photo Description: The crew installed curlex matting along the Going Away Side 10-foot buffer and stream bank.