STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-KL41	**Crossing Start Date:** 10/10/2023	**Crossing Completion Date:** 10/21/2023
Milepost: 267	**Pre-Con Assessment Date:** 09/30/2023	**Post-Con Assessment Date:** 10/21/2023
Station: 14105+32	**Stream Classification:** Perennial **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 12
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*	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.)*	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)*	1 - Optimal	1 - Optimal
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

09/30/2023: Pre-construction meeting and auditor assessment. The Precision foreman is Lance Romborg, and the MVP EI is Bill Leclair. Discussion topics during the meeting included: re-surveying the stream, blasting may be necessary in the stream due to substrate material, the timber bridge's location will be moved, and the bridge will be repaired due to a crack. Construction activities including the installation of dam and pump are anticipated to start on Monday, 10-02-23. -V. Smith

10-02 through 10-09-2023: Work in upland areas adjacent to resource, but no work in resource active yet. The crew is stockpiling the pipe adjacent to the resource. -V. Smith

10-09-2023: Welding of the pipe. Continued site prep. The installation of the bridge is anticipated for later today. The fish relocation has been scheduled for Tuesday, 10/10/23. Stream construction activities are inactive. -V. Smith

10-10-2023: In-stream crossing activity has begun. The fish have been relocated. The stream substrate has been excavated and segregated. A dam was installed downstream, and a dam & pump was installed upstream, a 3-inch pump is in place (a 6-inch pump and a spill kit are on site if required). The topsoil was excavated from the 10- and 50-foot buffer zones. The foreman confirmed that blasting and drilling activities are anticipated the next two days. -V. Smith

10-11-2023: Site activities consisted of drilling, blasting, and excavation of rock. -V. Smith

10-12-2023: Site activities consisted of drilling, blasting, and excavation of rock. -V. Smith

10-13-2023: Rock was hammered and removed from the trench. Excavation of the trench continued. The pipe was lowered into the trench and backfilling of the trench began. -V. Smith

10-14-2023: Restored the banks on both sides of stream, returned, and arranged rocks in the stream bed, Straw matting was installed on the stream banks. Rock check dams with rock shields were installed in the stream channel. The dam was removed, and flow was restored to the stream.

Item #9: Due to site specific safety concerns, the trench breakers will not be placed at 25-feet from the top-of-bank but instead will be installed 50-feet from the top-of-bank. -V. Smith

10-15-2023: Rock was hammered, and trench excavation continued. The pipe activities throughout the day consisted of welding, coating, and x-raying. -V. Smith

10-16-2023: Welding and x-raying of the pipe to prepare for the tie in pipe. -V. Smith

10-17-2023: Welding and x-raying of the pipe to prepare for the tie in pipe. -V. Smith

10-18-2023: Welding, coating, x-rays of the pipe in preparation for tie in pipe. Preparation for the installation of the trench breakers. Pallets were staged by the trench installation locations. Anticipated that the trench breakers will be installed today. -V. Smith

10-19-2023: Trench breakers were not installed yesterday, 10-18-23. Welding, coating, and x-rays of the pipe continue. A Trench breaker is installed on the GAS. -V. Smith

10-20-2023: Welding continues. Backfilling on the GAS is almost complete. The final weld for the tie in was completed. Installation of the trench breaker on the CIS is scheduled for tomorrow, 10-21-23. -V. Smith

10-21-2023: The trench breaker was installed on the CIS. Backfilling of the pipe and trench on the CIS. Backfilling and grading of the topsoil. Filter sock and 4-foot silt fences were installed along the perimeter. Restoration has been completed in the 10-foot buffer zones. Restoration of stream bed, topsoil, and substrate is complete. Erosion control matting was installed, seed and straw has been applied to the site. -V. Smith

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	Violet Smith *Print Name*	 *Signature*	10/23/2023 *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: Rock excavation of trench. Dam and pump functional and hoses conveyed across trench via extension ladder.

Photo Description: Dewatering structure installed and available for use throughout crossing activity.

Photo Description: Restoration of the topsoil adjacent to the stream. Seed and stabilization matting installed along streambanks.

Photo Description: Trench breaker in GAS.