STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-D14	**Crossing Start Date:** 01/11/2024	**Crossing Completion Date:** 01/20/2024
Milepost: 248.6	**Pre-Con Assessment Date:** 12/29/2023	**Post-Con Assessment Date:** 01/20/2024
Station: 13138+50	**Stream Classification:** Intermittent **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 7
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		
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")	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)*	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-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	4 - Poor
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)*	4 - Poor	4 - Poor
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

12/29/23- The pre-construction meeting and pre-construction assessment was completed. The MVP EI is A. Malnar. The site for the dewatering structure will need to be located and constructed. The wetland habitat log that was previously used to redirect stream flow back to its historically natural channel will be removed prior to construction and replaced during restoration. - S. Frost

12/30/23- No work was conducted in the resource. No forward progress can be made inside of the buffer area until the new easement variance is approved by FERC. Work is in progress in the upland area. -S. Frost

12/31/23- No work was conducted in the resource. Awaiting FERC approval for forward progress into the buffer area. No impacts to the biological conditions were observed. Trenching occurred outside of the 50-foot buffer in an upland area. - S. Frost

01/02/24- No work was conducted in the resource. Awaiting FERC approval for forward progress into the buffer area. No impacts to the biological conditions were observed. Pipe was installed in the trench on the Coming In Side (C.I.S.). - S. Frost

01/03/24- No work was conducted in the resource. The FERC approval was granted to move progress forward. Pipe QC and subsoil backfill was completed. No impacts to the biological conditions were observed. - S. Frost

01/04/24- No work was conducted in the resource. Environmental work will be completed in preparation for the anticipated rain/snow on Saturday, 01/06/24. No forward progress due to the anticipated rain/snow event. - S. Frost

01/05/24- No work was conducted in the resource. Pipe was delivered and prepared for welding in an upland area outside of the buffer area. - S. Frost

01/06/24- No work was conducted in the resource due to inclement weather. - S. Frost

01/07/24- Pipe QC was completed. The crew prepared for another rain event that is anticipated for Tuesday, 01/09/24. No work was conducted in the buffer area. - S. Frost

01/08/24 - No crossing construction activities occurred in the vicinity of the resource. All erosion control devices (ECD) were functioning as designed. No impacts to the biological conditions were observed. - K. Douglas

01/09/24 - No construction activities occurred due to inclement weather. - K. Douglas

01/10/24 - No construction activities occurred due to poor site conditions following the rain event. - K. Douglas

01/11/24 - DEQ was present onsite. The sandbag and Visqueen dam were installed. The bell hole was dewatered on the CIS. Construction began on the resource crossing. The soils were stripped and stockpiled. The top 12-inches of the substrate was segregated. The top 10-inches of topsoil was segregated and covered with Curlex matting. The habitat log, which was established prior to work at the site, disintegrated when it was removed from channel. A new log will be installed during the restoration that matches the previously installed habitat log's plans. A trench was established from the bell hole to the opposite side of resource Going Away Side (GAS). Soil spoils were relayed away from the work area. The flume, energy dissipation system, and light plant were installed. Sandbags were installed in the trench. - K. Douglas

01/12/24 – A hammer attachment was used to dislodge and remove rock from the trench near the loose pipe end (CIS). General maintenance and addition of ECDs continued. Limited work hours in preparation for inclement weather. - K. Douglas

01/13/24 – A double joint transition segment was lowered into the trench. The first weld was completed and x-rayed at the loose pipe end (CIS). No impacts to the downstream conditions were observed. - K. Douglas

01/14/24 – The first weld was sandblasted and coated. The trench was extended, and soil spoils were relayed to a stockpile. A multi bend, tie in segment was positioned at the trench with side booms, but multiple cuts and new welds were required as a result of an engineering error. The segment is anticipated to be lowered into the trench by Wednesday, 01/17/23. - K. Douglas

01/15/24 – The cuts were made and the first weld to the repaired segment was x-rayed, sandblasted, and coated. No crossing construction activities occurred near the resource. All ECDs were functioning as designed. - K. Douglas

01/16/24 - Cuts were made and further welds to the repaired segment were x-rayed, sandblasted, and coated. No crossing construction activities occurred near the resource. - K. Douglas

01/17/24 - DEQ was present onsite. The repaired tie in segment was lowered into the trench, welded, sandblasted and coated. An impervious bentonite trench breaker was installed (CIS) and the trench was backfilled in the upland. The replacement habitat log was delivered. The pipe was padded using a shaker bucket. The second trench breaker was installed (GAS). No impacts to the biological conditions were observed. -K. Douglas

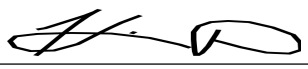
01/18/24 - Backfill and padding in the vicinity of the resource was completed. The stream channel and banks were roughed in. Tie in operations away from crossing are ongoing (GAS). Restoration is slated to begin Friday, 01/19/23. All ECDs were functioning as designed. - K. Douglas

01/19/24 - DEQ was present onsite. The flume was removed from the downstream area. Timber mats were installed in the resource, which allowed for bank contouring and the application of topsoil (CIS). The 50-foot FERC buffer zone was enclosed with silt fencing, seeded, and covered with Curlex matting. The survey crew was present and multiple points were shot within the channel for final contouring. The flume was reconnected. Restoration is scheduled to continue Saturday. 01/20/23. - K. Douglas

01/20/24 – The flume was removed, and the habitat log was placed in the vicinity of the resource. The thalweg was marked by the survey crew. Final bank contours were restored. The stream channel was cut in by hand with shovels. The habitat log was wrapped in Curlex matting and secured to the stream bed using embedded anchor cables. The silt fence was installed along the 10-foot buffer. The stream banks were seeded with a riparian seed mix and covered with Curlex matting. The dam was removed, and flow was restored to the stream channel. The post-construction auditor assessment was conducted. - K. Douglas

No impacts to biological conditions or unauthorized discharges 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	Keith Douglas *Print Name*	 *Signature*	01/20/2024 *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 channel substrate was stripped from the site.

Photo Description: An overview of the sandbag and Visqueen dam.

Photo Description: Installation of the impervious bentonite trench breaker (CIS).

Photo Description: Curlex matting was installed within the 10-foot buffer zone.