

# STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



<b>Stream ID:</b> S-E28-E	<b>Crossing Start Date:</b> 09/12/2023	<b>Crossing Completion Date:</b> 09/16/2023
<b>Milepost:</b> 259.3	<b>Pre-Con Assessment Date:</b> 08/29/2023	<b>Post-Con Assessment Date:</b> 09/18/2023
<b>Station:</b> 13704+90	<b>Stream Classification:</b> Perennial (Perennial, Intermittent, Ephemeral)	<b>Bankfull Width (ft.):</b> 12
<b>County:</b> Franklin	<b>303(d) Impairment Listing:</b> Impaired	<b>Riffle:Pool Complexes Present?</b> Yes

Item #	Resource Crossing Conditions	N/A	YES	NO
1.	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u>N/A</u> Fish Relocation? <u>Yes</u> Mussel Relocation? <u>N/A</u>		X	
2.	Is this resource designated a wild or stockable trout stream?			X
3.	Which crossing methods were utilized during the stream crossing? <i>(Select one or more)</i> 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.	<b>Predominant Substrate Type (select one):</b> <i>Bedrock, Boulder (&gt;10"), Cobble (2-10"), Gravel (0.1-2"), Sand (&lt;0.1"), Mud/Silt/Clay</i>	Mud/Silt/Clay	Mud/Silt/Clay
16.	<b>Channel Conditions:</b> <b>Rating:</b> 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	2 - Suboptimal
17.	<b>Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank:</b> <b>Rating:</b> 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.)	3 - Marginal	3 - Marginal
18.	<b>Instream Habitat Conditions:</b> <b>Examples:</b> 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. <b>Rating:</b> 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.	<b>Channel Alterations:</b> <b>Examples:</b> 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. <b>Rating:</b> 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)	2 - Minor	2 - Minor

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## Comments/Remarks

8-29-23: PRECON meeting. EI is Davey Johnston. Forman is Scooter. Stream is to be open cut. Banks will be restored to a 3:1 slope due to current steep slope conditions. -J. Vandertill

9-11-2023: 50' buffer topsoil stripped and stockpiled. 10' FERC buffer remained undisturbed. In-stream work scheduled to begin tomorrow 9-12-2023. -S. Fisher

9-12-2023: In-stream work starting today. Segregated topsoil. Edge, fish relocation team, came before digging into the stream and relocated fish. Pumps and dams installed and functioning prior to in-stream work and continue to pump as work progresses. Most of the trench was dug out and was almost ready for the pipe to be lowered into it.

Item #14: Flash rain event in the afternoon caused water to overtake the dams at the stream, filling the trench. Prior to the flow topping the dams the crew added additional bags to raise the height of the dams and started running a second pump to contain the additional flow, but the flow was too heavy. Site received ~1in rainfall in 20-30 minutes. Crew added two additional pumps (total of 4) in order to try and control the flow of water in order to install the new dams. Filter bags were being used on the pumps. 2 workers to stay overnight to ensure pumps are functioning. See additional photos below.

9-13-2023: Water level has gone down and dams are re-established. Dewatering the trench into dewatering area to the east. Crew did not end up using the metal dams because they were only authorized to do so after the water was under control and dams in place. DEQ Marshall Willis was on site to inspect the aftermath of the rain event. Dug out the rest of the trench. Lowered pipe into trench onto bags. Connection point being welded. PipeSaks installed at crossing. 6ft clearance from top of pipe without the pipesaks and 5ft clearance with the sacks at the crossing. Fill dirt being installed. Trench breakers may start tonight/tomorrow morning. Trench breakers to be installed approx 50' outside top of bank due to safety concerns. -S. Canfield

9-14-2023: Continuing to backfill the trench. Proceeded to fill in the stream crossing. Surveyed the stream crossing to confirm contours are the same as PRECON conditions. Put RB at a 3:1. Topsoil placed and raked out. Riparian seed placed, matting installed. Check dams installed. Pump and dams pulled out to release the stream. Restored up to the bridge as far as reasonably possible. Additional restoration will occur when the bridge is removed. 50ft buffer also restored. Filter socks and filter fence installed around the resource. Trench break installed adjacent to the left bank 18inches from surface. Will confirm distance from the resource. Second trench break adjacent to right bank will be installed after W-E8 crossing is complete. -S. Canfield.

9-15-2023: Trench breaker off of LB installed 27ft instead of within 25ft top of bank. The breaker was placed farther away to avoid placing it on a weld. Anticipate the second trench breaker off the RB will be installed 9-16-2023. 50ft buffer zones stabilized.

Spoke with MVP EI David Johnston regarding concerns with the depth of trenching of the erosion matting and recommended a crew go back in to assure the matting is secure. David said they trenched the matting to 3-4 inches and that it was sufficient. Per approved specification, erosion control matting should be keyed-in a minimum of 6". David indicated the crew did not need to go back to trench the matting any deeper, so the matting remains trenched at 3-4 inches. -S. Canfield

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9-16-2023: At auditor recommendation crews returned to key-in matting to 6" depth. The edge of the matting was pushed deeper into the ground with shovel heads. Some areas of matting do appear to have been pushed deeper into the ground while other areas do not, and Auditor cannot confirm all edges of the matting are keyed in to 6" of depth. The second trench breaker off the RB was installed 50ft from top of bank. El David J cited safety concerns with placing it that far away from the resource. It was installed 18" below grade.

Item #14: No accumulated construction material or visible sediment deposition was observed outside the permitted LOD, and the incident did not appear to adversely impact biological conditions. Fish, crayfish, frogs, and a crane were observed within the stream channel post-restoration. –S. Canfield

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.

<i>This report was written by</i>	<b>Stephanie Canfield</b> <i>Print Name</i>	<i>Stephanie Canfield</i> <i>Signature</i>	<b>09/19/2023</b> <i>Date</i>
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## 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.

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## Optional Additional Photos



**Photo Description:** Overtopped/flooded upstream dam at S-E28-E crossing.



**Photo Description:** Open trench flooded and downstream dam overtopped by rain/flood waters.



**Photo Description:** Next day additional pumps and dam reinforcements installed.



**Photo Description:** Downstream dam re-established and flooded trench now isolated from S-E28-E stream flow. Downstream turbidity significantly reduced from work area turbidity.

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## Optional Additional Photos



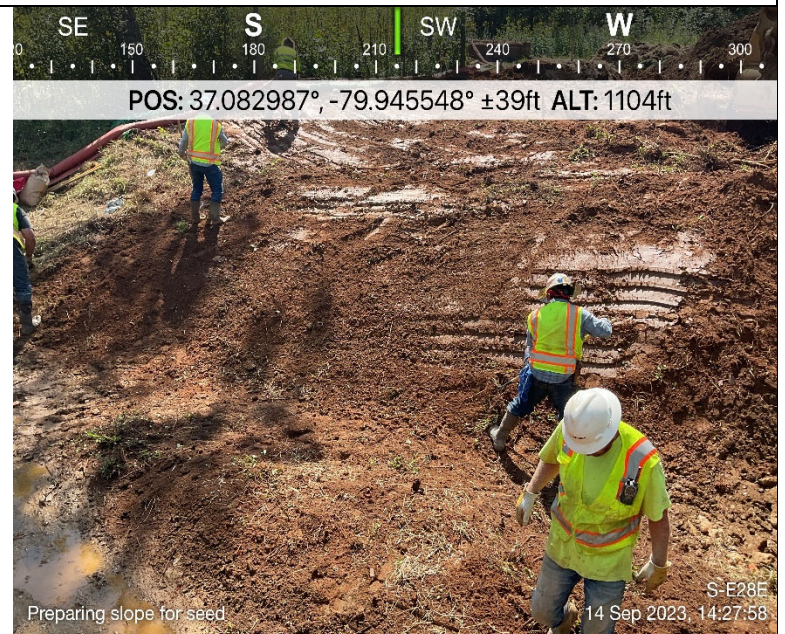
**Photo Description:** Downstream view of restoration 5 days post-restoration. No accumulated material, significant turbidity, or signs of accelerated erosion of stream banks was observed.



**Photo Description:** Trench breaker installations.



**Photo Description:** Restoration of stream substrate to channel.



**Photo Description:** Bank fine grading and raking of bank surface prior to application of seed mixes.