

# STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



<b>Stream ID:</b> S-D8	<b>Crossing Start Date:</b> 11/10/2023	<b>Crossing Completion Date:</b> 11/20/2023
<b>Milepost:</b> 249.8	<b>Pre-Con Assessment Date:</b> 10/31/2023	<b>Post-Con Assessment Date:</b> 11/24/2023
<b>Station:</b> 13196+68	<b>Stream Classification:</b> Perennial (Perennial, Intermittent, Ephemeral)	<b>Bankfull Width (ft.):</b> 18
<b>County:</b> Franklin	<b>303(d) Impairment Listing:</b> Impaired	<b>Riffle:Pool Complexes Present?</b> No

Item #	Resource Crossing Conditions	N/A	YES	NO
1.	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u>Yes</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? (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.	<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>	Cobble (2-10")	Cobble (2-10")
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)	2 - Suboptimal	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)	1 - Negligible	1 - Negligible

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## Comments/Remarks

10/17/23- The pre-construction meeting and pre-construction assessment were completed. The MVP EI on-site is James Simmons. -S. Frost

10/18/23- A timber mat bridge was installed over the resource. Biological conditions remained stable with no impacts. - S. Frost

10/31/23- A second pre-construction meeting and pre-construction assessment was completed. A fish relocation is required. Sandbags and visqueen dams will be used. Two upstream dams and one downstream dam with 2 or more filter bag energy dissipaters with native rock to prevent scouring from the 2 electric 6-inch pumps. Stream substrate will be stored on mats and geo tech in an upland area. Cobble from the stream bed will be stored in clean super sacs in an upland area. - S. Frost

11/1/23- No work in the resource. Biological conditions remain stable. - S. Frost

11/2/23- A dry well was created outside of the 50-foot buffer to control ground water once trenching begins. Water is being pumped into one of the two dewatering structures. The upland topsoil stockpile was relocated for additional workspace outside of the 50-foot buffer. No work in the resource area and biological conditions remain stable. -S. Frost

11/3/23- Opened the loose end of the pipe on the C.I.S. outside of the 50-foot buffer. Excess ground water was pumped into the dewatering structure. Upland topsoil was stabilized with clean straw. No work in the resource area and biological conditions remain stable. - S. Frost

11/4/23- The loose end of the trench on the C.I.S. outside of the 50-foot buffer has gained control of the excess groundwater with a 3-inch and 2-inch pump and is being sent to the dewatering structure. The top 12-inches of topsoil from within the 50-foot buffer was stripped and segregated in an upland area and stabilized with clean straw. No work in the resource area. Biological conditions remain stable. -S. Frost

11/6/23- Trenching in the upland area through the 50-foot buffer was completed. Excess groundwater remains under control with multiple pumps. The dewatering structure is functioning properly. Re-engineering of pipe in progress in an upland area. Fish relocation set for 11/7/23. No work in the resource area. Biological conditions in the resource remain stable. - S. Frost

11/7/23- The pipe was laid into the trench in the upland area outside of the 50-foot buffer. The C.I.S. weld was completed. The x-ray failed. Repair of the weld began. Fish relocation is now set for 11/8/23. No work in the resource area. Biological conditions in the resource remain stable. -S. Frost

11/8/23- Completed the weld repair. The fish relocation and dam and pump around were rescheduled for 11/9/23.

11/9/23. Prep work in progress to begin the dam and pump around for the stream. X-ray, coating, and jeep were completed. No work in the resource and biological conditions remain stable. Upstream and downstream fish nets were installed inside of the L.O.D. and the fish relocation was completed. 100+ fish were relocated downstream. Backfilling subsoil in the upland area occurred outside of the 50-foot buffer. Cobble was removed from the stream banks and stream bed during fish relocation and placed in clean super sac bags to be used for restoration. The

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super sac bags were stored in an upland area. Pumps were tested and 1 of 4 worked causing a delay in damming the stream. Biological conditions in the resource remain stable. Proper ECD's were put in place due to the anticipated rain event on 11/10/23. - S. Frost

11/10/23- Three 6-inch pumps were installed upstream and functioning properly. One double wide sandbag and visqueen dam were installed upstream and one downstream. Two filter bags, visqueen, and plywood energy dissipaters were installed downstream, and two 6-inch hoses were attached. The Dam and pump around were functional and no downstream scouring was observed. Preparations to remove stream substrate on 11/11/23. Downstream flow remains consistent and biological conditions remain stable. -S. Frost

11/11/23- The pumping operation into the energy dissipater was functioning properly. The top 12-inches of stream substrate were removed and segregated on Geotech, placed on timber mats in an upland area, and stabilized. The top 12-inches of the buffer topsoil was removed, segregated in an upland area, and stabilized with clean straw. Trenching will begin on 11/13/23. Downstream flow remains consistent and biological conditions remain stable. -S. Frost

11/13/23- The pumping operation into the energy dissipater was functioning properly. Dewatering of the trench into the dewatering structure was functioning properly. Trenching through Dillons Mill Road began. The subsoil was excavated and moved to an upland area for sifting and stockpiling to be used for padding and backfill. The downstream flow remains consistent and biological conditions remain stable. - S. Frost

11/14/23- The trench was being dewatered into the dewatering structure, which is functioning properly. The upstream pumping operation was functioning properly into the energy dissipater. Metamorphic bedrock 3-feet under the surface in the 10-foot buffer was discovered. A hammer attachment was added, and hammering began. Trenching through the resource continues. The downstream flow remains consistent and biological conditions remain stable. -S. Frost

11/15/23- Hammering within the resource caused a main line hydraulic leak on the machine. Approximately 10 gallons of hydraulic fluid leaked onto the timber mat bridge. A spill kit was immediately opened, and clean-up efforts commenced. No impacts to the resource were observed. A mechanic was on-site to complete repairs and clean-up on the belly pan of the machine. The timber mat bridge will be replaced by the EOD. A spill report will be completed by the EI on-site and submitted. The spill report document is #2103. The clean-up materials were loaded onto a dump truck to be taken to the spread yard for proper disposal. The bridge was deconstructed and removed. New 40-foot runners, geotech, and timber mats were installed. The downstream flow remains consistent and biological conditions remain stable. - S. Frost

11/16/23- The dam and pump were functioning properly. The trench was dewatering into the dewatering structure which is functioning properly. The timber mat bridge installation was completed. Trenching through the resource was completed. Preparations to install pipe into the trench commence. Downstream flow remains consistent and biological conditions remain stable. - S. Frost

11/17/23- The dam and pump were functioning properly. The trench was being dewatered into the dewatering structures, which were functioning properly. Hammering and trenching was completed. The stream section of the pipe was lowered into the trench. Welding is anticipated to begin on 11/18/23. Proper ECD's are in place for the anticipated overnight rain event. Downstream flow remains consistent and biological conditions remain stable. -S. Frost

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11/18/23- The dam and pump were functioning properly. The trench was dewatering into the dewatering structure, which was functioning properly. Welding has been completed. X-ray, coating and jeep were completed on the G.A.S. Trench breakers, backfill, and restoration are anticipated to begin on 11/20/23. The downstream flow remains consistent and biological conditions remain stable. - S. Frost

11/20/23- The dam and pump were functioning properly. The trench was dewatering into the dewatering structure, which was functioning properly. The padded dirt was backfilled into the trench. Two impervious trench breakers were installed within 25-feet of both sides of the 10-foot buffer. Subsoil backfill continues through the buffer areas. The top 12-inches of clean topsoil was restored and contoured to the final survey grade. The top 12-inches of clean stream substrate was restored and contoured to the final survey grade. The stream cobble was replaced on the banks for stabilization and on the stream bed. Seeding was applied. Stabilization matting with pins properly installed and keyed in 6-inches within the 10-foot buffer. Dams, pumps, and energy dissipaters were removed, and flow was restored. The post-construction assessment will be completed on 11/22/23 after the anticipated rain event on 11/21/23. Biological conditions remain stable within the resource. No unauthorized discharges were observed during construction. - S. Frost

11/24/23- The post-construction assessment was completed. - S. Frost

No impacts to biological conditions or unauthorized discharges were observed during the crossing activity.

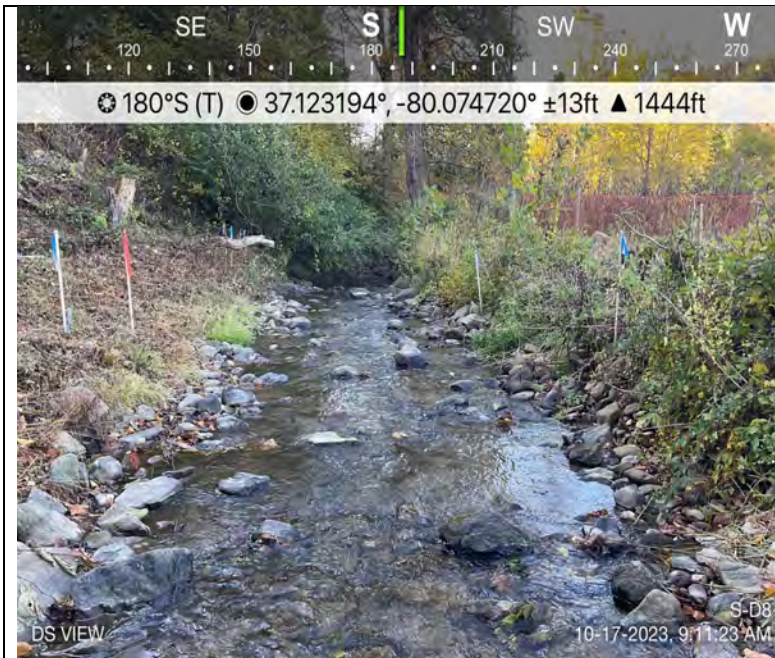
In accordance with the Mountain Valley Pipeline Consent Decree, Case No. CL18006874-00, (Issued October 11, 2019) this independent report was completed to document the on-site monitoring of instream invertebrate and fisheries resources during all construction activity related to waterbody and wetland crossings, and document instream conditions and any impacts to the resources.

<i>This report was written by</i>	<b>Summer Frost</b> <hr style="width: 80%; margin: 0 auto;"/> <i>Print Name</i>	 <hr style="width: 80%; margin: 0 auto;"/> <i>Signature</i>	<b>11/24/2023</b> <hr style="width: 80%; margin: 0 auto;"/> <i>Date</i>
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## Required Photos



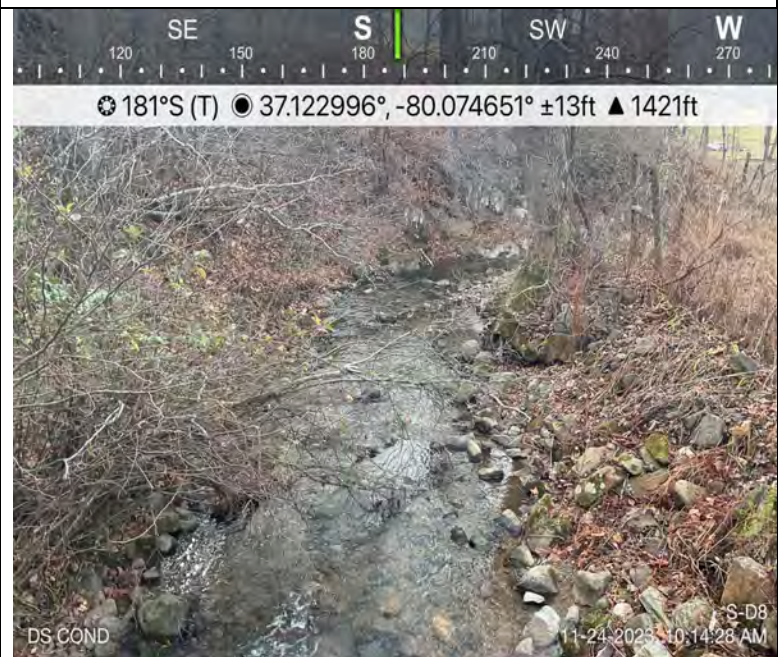
**Photo Description:** Downstream view of permitted impact area during pre-construction assessment.



**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.

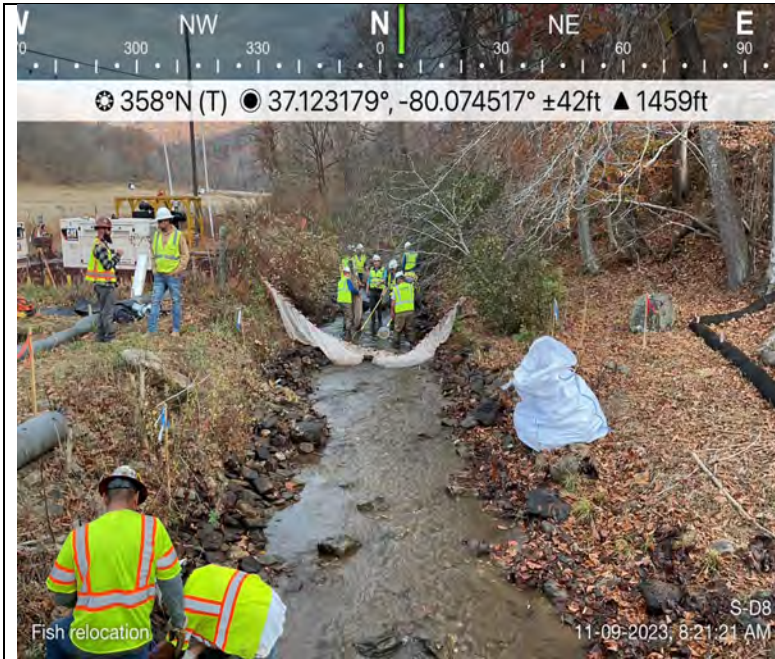


**Photo Description:** Conditions of the downstream area outside the ROW during post-construction assessment.

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## Optional Additional Photos



**Photo Description:** Fish relocation within the stream. The fish were relocated downstream. Upstream and downstream fish nets were installed.



**Photo Description:** Stream substrate and stream cobble stockpiled on timber mats and geotech outside of the 50-foot buffer.



**Photo Description:** Dewatering structures used for filtering ground water from the trench.



**Photo Description:** Survey shooting the final grade for the stream and banks within the 10-foot buffer.