

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



Stream ID: S-EF55	Crossing Start Date: 08/31/2023	Crossing Completion Date: 09/22/2023
Milepost: 241.1	Pre-Con Assessment Date: 08/26/2023	Post-Con Assessment Date: 09/25/2023
Station: 12743+89	Stream Classification: Intermittent (Perennial, Intermittent, Ephemeral)	Bankfull Width (ft.): 8
County: Roanoke	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)? <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? <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.	Predominant Substrate Type (select one): <i>Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay</i>	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)	2 - Suboptimal	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	2 - Suboptimal
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	3 - Marginal
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

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



Comments/Remarks

EI on site is James Simmons. This resource is crossed in conjunction with S-EF34b. S-EF55 converges with S-EF34b within permitted ROW.

8/26/2023: Pre crossing meeting discussed how fish have already been relocated from stream, after topsoil relocation and quarantining they are planning to use dynamite due to bedrock testing done 50ft outside of the buffer zone. Live planting of plants is planned for post construction recovery. -A. Burge

8/31/2023: crews started topsoil removal and containment of topsoil of stream. -A. Burge

9/1/2023: Edge removed and relocated crawfish and salamanders further downstream. The crews started removing cobblestones and substrate of stream bed soil so drilling holes for blasting can be done for pipe installation of site. -A. Burge

9/2/2023: Dam and pump functioning properly. Prepping for trenching outside of 50 ft buffer. -S. Frost

9/3/2023: Dam and pump functioning properly. Trenching began at loose end outside of 50 ft buffer. - S. Frost

9/4/2023: Dam and pump functioning properly. Trenching continues outside of 50ft buffer. -S. Frost

9/5/2023: Dam and pump functioning properly. Trenching continues outside and slightly inside of 50 ft buffer. Pipe lowered into upland trench. Prep work for welding. -S. Frost

9/6/2023: Welding started at PI. -S. Frost

9/7/2023: Welding continued. X-ray, coated, and jeeped. Dam reinforced due to excessive rainfall. -S. Frost

9/8/2023: Second weld started. X-ray, coated, and jeeped. -S. Frost

9/11/2023: Subsoil stripped and stockpiled from 50 ft buffer zone so work can start prepping for crossing.
-A. Burge

9/12/2023: Pipe welding with X-ray QC outside 10ft buffer zone of the stream. -A. Burge

9/13/2023: Welding and X-ray outside of 10ft buffer. - S. Frost

9/14/2023: Sand blasted and coated weld outside 10 ft buffer. - S. Frost

9/15/2023: Trench breakers installed outside of 50 ft buffer at PI. - S. Frost

9/16/2023: Sand blasted and coated PI weld. -S. Frost

9/18/2023: Trenching inside 10ft buffer. Trench box installed at 50ft buffer. -S. Frost

9/19/2023: Trenching continues within 10ft resource buffer. - S. Frost

**STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT**

Version 2.3



9/20/2023: Pipe lowered into trench. Welding completed, X-ray, coated, and jeep tested. - S. Frost

9/21/2023: Trench breakers installed and partial backfill. -S. Frost

9/22/2023: Flow restored and restoration complete. Post con assessment will be completed at a later date due to late day restoration. -S. Manzo


9/25/2023: Post-con assessment completed. - S. Frost

Item #1: Time of Year Restriction—Brook Trout: October 1 through March 31.

Item #2: None, but upstream of trout water (Brook Trout)

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.

<i>This report was written by</i>	Sergio Manzo Saavedra <i>Print Name</i>	 <i>Signature</i>	09/26/2023 <i>Date</i>
-----------------------------------	---	---	----------------------------------

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3

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. S-EF55 converges with S-EF34b within ROW, then S-EF34b flows off ROW.



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: Partial backfill of resource with subsoil prior to restoration. Dam and pumps remain installed and functioning.



Photo Description: Survey crews staking out as-builts for restoration crews.



Photo Description: Restoration of topsoil and stream substrate for restoration.

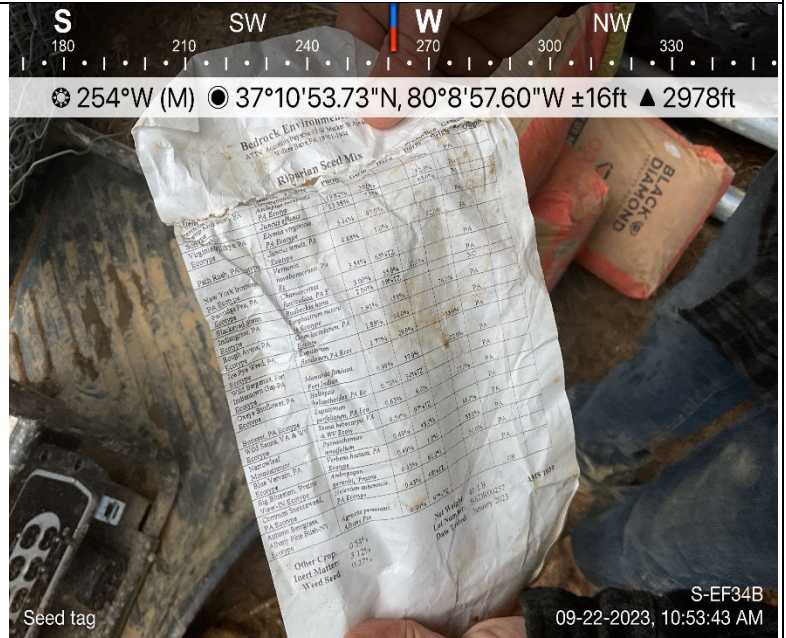


Photo Description: Riparian permanent seed mix applied to stream banks during restoration.