

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



Stream ID: S-NN12	Crossing Start Date: 08/09/2023	Crossing Completion Date: 09/01/2023
Milepost: 214.4	Pre-Con Assessment Date: 08/08/2023	Post-Con Assessment Date: 09/01/2023
Station: 11327+85	Stream Classification: Ephemeral (Perennial, Intermittent, Ephemeral)	Bankfull Width (ft.): 2
County: Giles	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>N/A</u> Fish Relocation? <u>N/A</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>	Mud/Silt/Clay	Mud/Silt/Clay
16.	Channel Conditions: Rating: 1-Optimal (80-100% stable banks), 2-Sub-optimal (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-Sub-optimal (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)	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

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Comments/Remarks

7/10/23 ARB

N/A substrate type noted as no substrate on baseline. Bedrock will be blasted.

N/A instream habitat no water flow.

7/11/23 ARB

Encompass resurveyed 3 cross sections.

7/10/23 ARB

Discussion of dam and pump method and additional flume method to be utilized.

Andrea with TRC walked Els to spring located off ROW to ensure placement of dewatering feature is okay.

Dewatering structure is complete and TMB has been replaced.

8/8/23 SS

Precon meeting - No water flow.

8/9/23 SS

Test drilling was done to test for bedrock, 10' stream buffer not drilled, water found during test drilling.

Vegetation barrier used in buffer for stream substrate, dam put in place for stream, pumps on site but not in buffer until after blasting, topsoil and stream substrate removed and segregated, drill holes laid out and drilled, blast completed at 5:20pm, subsoil in stream buffer after blast, subsoil cleaned out of no construction buffer area, socks, dam, pump, and dissipator set up, water bars built back.

8/10/23 SS

Shutdown due to rain, AB checked pumps, estimated 0.3-0.5" of rain.

8/11/23 SS

Plastic laid out to keep subsoil out of buffer zone, trenching started, water in trench, new dewatering station built at top of hill to avoid contaminating offsite spring, pump was used without bag in old dewatering station, pumped a few hundred gallons, pump shut down, water running into pit, new dewatering station and pumps tested, silt fence broke by subsoil pile on LOD.

8/12/23 SS

Trench breaker areas marked out by survey, trenching continues, hammering rock that wasn't broken by blasting, pipe put across top of ditch for erosion control, topsoil and stream substrate more heavily strawed.

8/14/23 SS

Trenching, bell hole starts, welding.

8/15/23 SS

Removing dirt around pipe in bell hole, welding.

8/16/23 SS

Digging other bell hole, hammering.

8/17/23 SS

Digging other bell hole, hammering, two hammers failed, one hammer seal failed, hydraulic oil spilled, spill report filed by EI.

8/18/23 SS

Hammering in trench, finished trenching.

8/19/23 SS

Brought pipe in.

8/21/23 SS

Pipe pieces welded together, trench cleaned.

8/22/23 SS

Pipe set in trench, not enough clearance, removed, trench dug out/hammered.

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8/23/23 SS
Pipe set in trench, not enough clearance, removed, more hammering, first pipe section getting welded, welding and x-ray finished.

8/24/23 SS
Cleaning out trench for next section, most water pumped out, pipe segment in, welding started.

8/25/23 SS
No work due to rain out, est 0.3".

8/26/23 SS
Late start due to bird survey, finishing weld from 8/24, sandblasting and coating weld from 8/23, last segment of pipe brought in, welding.

8/27/23 AB
Welding day.

8/28/23 SS
Back filling driving lane, x-ray tomorrow, coating welds.

8/29/23 SS
Back filling, two hydraulic oil spills EI did reports, not in buffer areas.

8/30/23 SS
Rain overnight est 0.2", back filling, trench breakers, finished sand blasting last welds and coating, old dewatering station back in use to get last little bit of trench water out before padding and backfill.

8/31/23 SS
Backfilling, padding pipe, backfilling finished, topsoil brought in, survey installed stakes, stream substrate brought in.

9/1/23 SS
Survey helping env crew get stream contours to grade, stream restoration in progress and finished, buffer areas mulched, curlex installed, surrounded with compost sock, seeded with riparian seed mix.

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	Steven Schoeniger <hr style="width: 80%; margin: 0 auto;"/> <i>Print Name</i>	 <hr style="width: 80%; margin: 0 auto;"/> <i>Signature</i>	09/01/2023 <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.

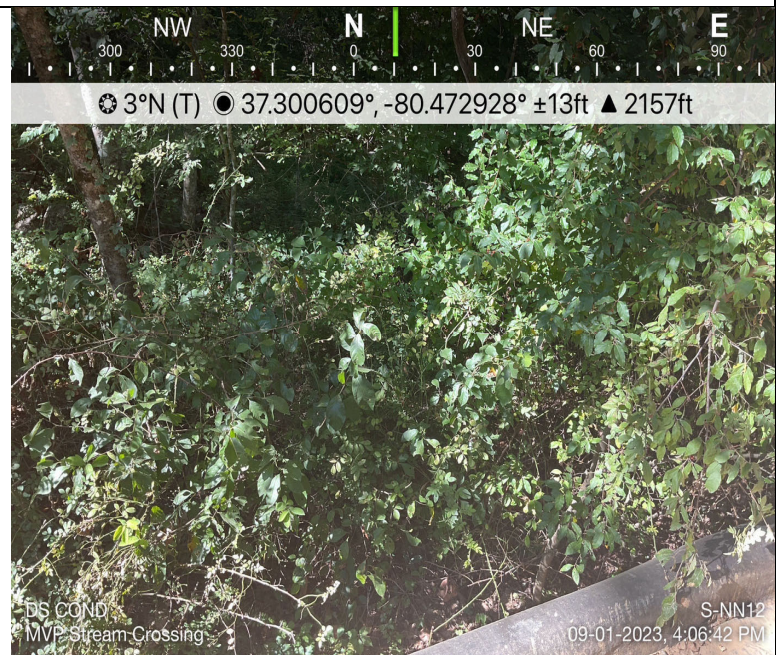


Photo Description: Conditions of the downstream area outside the ROW during post-construction assessment.

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Optional Additional Photos



Photo Description: Dewatering structure.



Photo Description: Segregation of soil.



Photo Description: Stream substrate segregation.



Photo Description: Stream restoration finished.