

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



Stream ID: S-KL43	Crossing Start Date: 09/06/2023	Crossing Completion Date: 09/16/2023
Milepost: 215	Pre-Con Assessment Date: 09/02/2023	Post-Con Assessment Date: 09/16/2023
Station: 11360+54	Stream Classification: Perennial (Perennial, Intermittent, Ephemeral)	Bankfull Width (ft.): 10
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>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-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.)	4 - Poor	3 - Marginal
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)	2 - Suboptimal	2 - Suboptimal
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)	2 - Minor	2 - Minor

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Comments/Remarks

9/2/2023: Precon photos taken, item #19 area within LOD negligible, down stream conditions impacted by cow crossing and landowner driving lane, upstream conditions impacted by cow crossing, Item #15 50% cobble 50% gravel. – S. Schoeniger

9/5/2023: Precon meeting. – S. Schoeniger

9/6/2023: Fish relocation, dam and pump installed, cobble put in super sack, stream substrate and topsoil stripped back and segregated. – S. Schoeniger

9/7/2023: Drilling and shot installed, trenching started. – S. Schoeniger

9/8/2023: Rain event est 0.8", minor sloughing of trench side from rain, trenching, welding outside of trench, bridge built across trench for landowner. – S. Schoeniger

9/9/2023: Coating/jeeping two section pipe, sandbags put in trench for pipe, dissipator and dissipator dam began sloughing into trench, set up plywood, plastic and rock dam for energy dissipation under bridge. – S. Schoeniger

9/11/2023: Two section pipe brought down, welding in trench, rest of trench being prepped for sandbags and next pipe section. – S. Schoeniger

9/12/2023: Second section of pipe through stream crossing in trench, welding. – S. Schoeniger

9/13/2023: Final weld complete. X-rays begin. – A. Breeding

9/14/2023: X-rays complete. Padding and backfilling begin. – A. Breeding

9/15/2023: Padding completed. Subsoil backfill complete. Topsoil restoration complete. Survey stake out of banks. Stream soil and substrate restored. – A. Breeding

9/16/2023: Final survey complete and stream restored. 10ft buffers stabilized with ecm, seeded and strawed. End section to remain open for tie in with main line. – A. Breeding

Item #17 & #19: Historically used as agricultural farmland with evidence of cattle in stream.

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	Allie Breeding <i>Print Name</i>	 <i>Signature</i>	09/16/2023 <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.

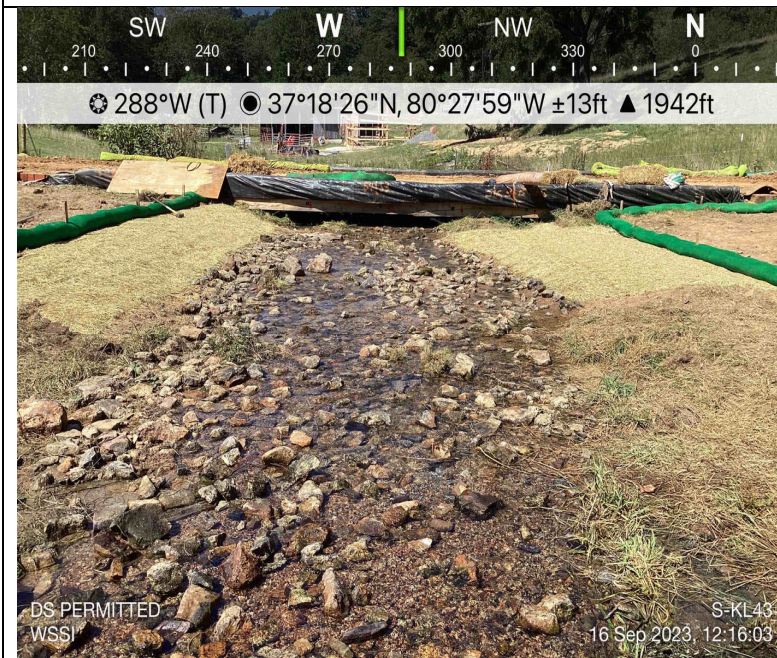


Photo Description: Downstream view of permitted impact area during post-construction assessment.



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

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Optional Additional Photos



Dam and Pump
WSSI

S-KL43
14 Sep 2023, 13:02:01

Photo Description: Dam and pump.



Soil Segregation
WSSI

S-KL43
14 Sep 2023, 13:02:22

Photo Description: Soil and substrate segregation.



Survey Stakeout
WSSI

S-KL43
15 Sep 2023, 16:45:35

Photo Description: Survey stakeout complete.



Trench Breakers
WSSI

S-KL43
15 Sep 2023, 10:25:33

Photo Description: Trench breakers installed.