

STREAM BIOLOGICAL CONDITIONS ENVIRONMENTAL AUDITOR REPORT

Version 2.3



Stream ID: S-GH9	Crossing Start Date: 09/01/2023	Crossing Completion Date: 09/07/2023
Milepost: 252.4	Pre-Con Assessment Date: 08/26/2023	Post-Con Assessment Date: 09/12/2023
Station: 13337+13	Stream Classification: Perennial (Perennial, Intermittent, Ephemeral)	Bankfull Width (ft.): 3
County: Franklin	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>	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)	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-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	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)	1 - Negligible	1 - Negligible

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Comments/Remarks

9/1/2023: Topsoil was removed and contained, separated from subsoil of stream. See Optional Additional Photos of topsoil removal. -A. Burge

9/2/2023: Stream substrate was removed and contained with separation from trench spoils of GH9. -A. Burge

9/3/2023: Crossing activity has entered 50' buffer zone of the stream. -A. Burge

9/4/2023: Pipe has been installed under the stream with sandbags for support.

-A. Burge

9/5/2023: Trench breakers were installed 25' above the stream with bentonite bags and subsoil as back fill to provide support for the trench breakers. -A. Burge


9/6/2023: Subsoil was used to make the banks of the stream as surveyors helped ensure that stream banks reached proper contours to maintain the pre-existing channel of the stream. Wetland seed mix was used on stream banks with keyed-in straw matting. Surveyors participated in every step of the stream's rebuilding to maintain a minimal impact. This was done by checking elevations of both sides of the stream channel to pre-construction conditions shown in plan sheets. All survey stakes were confirmed by project personnel to be at acceptable depth of the stream resource. Surveyors took extensive measurements to ensure that the stream substrate was at proper depth to ensure the thalweg functioned properly. Dam and pumps remain installed.

-A. Burge

9/7/2023: Stream flow was restored. Surveyors stated stream is within acceptable limits of depth to be restored. Stream flow is functioning as anticipated. -A. Burge

9/12/2023: Post construction photos and verification that stream crossing is complete. -A. Burge

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>	Adam Burge <i>Print Name</i>	 <i>Signature</i>	09/12/2023 <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



Photo Description: Upstream dam placed in stream.



Photo Description: Stream substrate removal and segregated away from trench materials.



Photo Description: Stream substrate material contained with straw matting to prevent contamination.



Photo Description: Pump containment structure to contain any potential leaks/spills.