



# Stream Biological Conditions EA Report

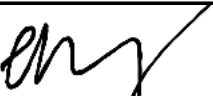
<b>Project Name</b>	H-600 Pipeline Spread A	<b>AFE</b>	124300129	<b>Spread</b>	H-600 Pipeline Spread A
<b>Contractor</b>	Precision	<b>Report #</b>	285		
<b>Environmental Auditor</b>	Elyse Johnston	<b>Date/Time</b>	10/4/2023 12:05 PM		
<b>Stream ID</b>	S-A110/K62	<b>Crossing Start Date</b>	10/4/2023	<b>Crossing Completion Date</b>	10/13/2023
<b>Milepost</b>	34.96	<b>Pre-Con Assessment Date</b>	10/4/2023	<b>Post-Con Assessment Date</b>	10/16/2023
<b>Station</b>	1845+95	<b>Bankfull Width (ft.)</b>	1.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Intermittent		
<b>County</b>	Doddridge	<b>303(d) Impairment Listing</b>	No		

### Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u>  N/A  </u> Mussel Relocation? <u>  N/A  </u>	N/A
2	This question is not applicable in WV.	
3	Which crossing methods were utilized during the stream crossing? (If so select one or more) Dam & Pump <input checked="" type="checkbox"/> Flume <input type="checkbox"/> Cofferdam <input type="checkbox"/> Conventional Bore <input type="checkbox"/> Horizontal Directional Drill (HDD) Bore <input type="checkbox"/>	
4	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?	Yes
5	Was excess material not needed for backfill removed and disposed of in an upland area?	Yes
6	Was the top 12-inches of backfill made with clean native stream substrate?	Yes
7	Was the pre-construction survey data utilized during restoration in attempt to re-establish pre-construction contours?	Yes
8	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?	No
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?	Yes
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?	See Below
11	Was the time of disturbance minimized by conducting resource work continuously to completion?	Yes
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?	Yes
13	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 - 4/30)?	N/A
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.	No

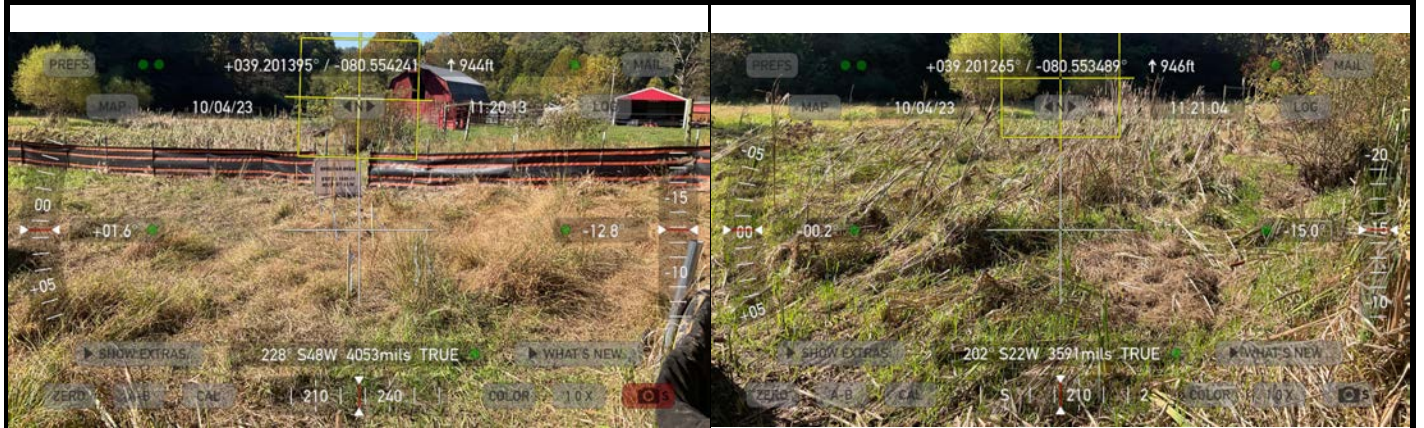
### Biological Conditions

		Pre-Con	Post-Con
15	<b>Predominant Substrate Type (select one):</b> Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Mud/Silt/Clay	Mud/Silt/Clay
16	<b>Channel Conditions: Rating:</b> 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	5
17	<b>Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank: Rating:</b> 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	4

<b>AFE</b>	124300129	<b>Date/Time</b>	10/4/2023 12:05 PM	<b>Report #</b>	285	
<b>Biological Conditions Continued</b>					<b>Pre-Con</b>	<b>Post-Con</b>
18	<b>Instream Habitat Conditions:</b> 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, Varied combination of water velocities, 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	4	
19	<b>Channel Alterations:</b> 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	4	
<b>Additional Notes</b>						
<p>10/4 Pre-construction meeting was held and pre-construction assessment was conducted. Stream was rated as "suboptimal" (question 16), "poor" (question 17), "poor" (question 18), and "minor" (question 19) for pre-construction biological conditions due to the lack of bed/bank structure, channel definition, water flow, biological resources (fisheries and macro-invertebrates), and in-stream habitat. This stream has been previously modified by culverts and mowing activities from landowner. The contractor installed the dam and pump and commenced sheet piling. No biological resources to relocate from in-stream.</p> <p>10/5 Stream S-A110/K62 topsoil removal occurred. Topsoil was segregated, stockpiled (within the wetland immediately adjacent to the trench), labeled with proper signage, placed in 2 containments, and covered with plastic lining. Bracing of sheet piling through the wetland W-A23 and stream S-A110/K62 complex occurred. Excavation of trench occurred. Timber mats were placed overtop of sheet piling installed through the wetland and stream complex to aid in excavation of the tie-in. The portions of wetland W-A23 and stream S-A110 /K62 immediately adjacent to the trench were covered with a plastic cover to prevent any displaced sediment (splatter) during excavation of the trench being discharged into these resources. The majority of this work occurred in Spread A.</p> <p>10/6 Excavation of wetland subsoil within the trench occurred. Timber mats were placed overtop of sheet piling installed through the wetland and stream complex to aid in excavation of the tie-in. The portions of wetland W-A23 and stream S-A110/K62 immediately adjacent to the trench were covered with a plastic cover to prevent splatter. The majority of this work occurred in Spread A.</p> <p>10/7 Same work as 10/6 occurred. A segment of the pipe was installed. Welding of the pipe occurred.</p> <p>10/9 Same work as 10/7 occurred in both Spreads A &amp; B. Trench breaker installation occurred.</p> <p>10/10 Excavation of upland in between wetland and Stream S-A111/K62 occurred. Backfilling of wetland trench occurred. Topsoil stockpile adjacent to backfilling location and the stream S-A110/K62 covered with plastic for protection from splatter. Welding, coating, and X-ray of pipe occurred. Trench breaker installation occurred.</p> <p>10/11 Backfilling of wetland trench occurred. Topsoil stockpile adjacent to backfilling location and the stream S-A110/K62 covered with plastic for protection from splatter. Welding, coating, and X-ray of pipe occurred. Trench breaker installation occurred.</p> <p>10/12 Backfilling of wetland trench occurred. Topsoil stockpile covered with plastic for protection from splatter. Trench breaker installation completed. Backfill of stream completed, pending topsoil and restoration. Crew installed a silt fence adjacent to stream and wetland and the road/upland to protect exposed subsoil and resources overnight.</p> <p>10/13 Stream S-A110/K62 topsoil/substrate restored and stabilized. Survey, EI, and EA all in agreement. Dam pulled. Sheet piling removed from wetland W-A23. The portions of wetland immediately adjacent to stream S-A110/K62 were also restored with its respective topsoil. Continued backfill of wetland.</p> <p>10/16 Post-construction assessment: Stream was rated as "severe" (question 16), "poor" (question 17), "poor" (question 18), and "severe" (question 19) due to lack of vegetation in disturbed permitted impact area following the completion of the crossing and restoration efforts. The S-A110/K62 stream's bank and bed substrates have been properly stabilized (to the extent practicable without applying mulch due to resource being located in a wetland) and the disturbed area has been seeded with the appropriate permanent seed mix in accordance with Appendix B: Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration, and Mitigation Framework.</p> <p>In accordance with the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework, 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.</p>						
<b>Name</b>		<b>Signature</b>		<b>Company</b>		<b>Date</b>
Elyse Johnston				ERM		10/16/2023

<b>AFE</b> 124300129	<b>Date/Time</b> 10/4/2023 12:05 PM	<b>Report #</b> 285
----------------------	-------------------------------------	---------------------

**Required Photos**



<b>GPS Location</b>	See photo	<b>GPS Location</b>	See photo
<b>Description</b>	Downstream view of permitted impact area during pre-construction assessment.	<b>Description</b>	Downstream view of unimpacted area during pre-construction assessment.









<b>GPS Location</b>	See photo	<b>GPS Location</b>	See photo
<b>Description</b>	Downstream view of permitted impact area during post-construction assessment.	<b>Description</b>	Downstream view of unimpacted area during post-construction assessment.



<b>GPS Location</b>	See photo	<b>GPS Location</b>	See photo
<b>Description</b>	View of sheet piling & pump and dam.	<b>Description</b>	View of topsoil.

<b>A/E</b>	124300129	<b>Date/Time</b>	10/4/2023 12:05 PM	<b>Report #</b>	285
------------	-----------	------------------	--------------------	-----------------	-----

**Optional Photos**

			
<b>GPS Location</b>	See photo	<b>GPS Location</b>	See photo
<b>Description</b>	View of culverted stream (upstream of crossing) vegetative conditions pre-construction.	<b>Description</b>	View of culverted stream (upstream of crossing) vegetative conditions post-restoration.
			
<b>GPS Location</b>	See photo	<b>GPS Location</b>	See photo
<b>Description</b>	View of stream covered with plastic tarp to prevent discharge from equipment moving dirt.	<b>Description</b>	View of sheet pile removal.
			
<b>GPS Location</b>	See photo	<b>GPS Location</b>	See photo
<b>Description</b>	View of silt fence added to protect resource overnight prior to adding topsoil (stream officially restored 10/13).	<b>Description</b>	View of area post-restoration.