



Stream Biological Conditions EA Report


Project Name	H-600 Pipeline Spread C	AFE	124300131	Spread	H-600 Pipeline Spread C
Contractor	Precision	Report #	348		
Environmental Auditor	Brian Montgomery	Date/Time	11/8/2023 9:41 AM		
Stream ID	S-E78/E82/R1	Crossing Start Date	11/8/2023	Crossing Completion Date	11/15/2023
Milepost	81.82	Pre-Con Assessment Date	11/8/2023	Post-Con Assessment Date	11/15/2023
Station	4320+17	Bankfull Width (ft.)	4.0	Riffle:Pool Complexes Present?	No
State	WV	Stream Classification	Perennial		
County	Webster	303(d) Impairment Listing	No		

Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? <u>Yes</u> Mussel Relocation? <u>N/A</u>	See Below
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 checked="" 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?	Yes
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	Predominant Substrate Type (select one): Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Sand (<0.1")	Sand (<0.1")
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	1
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.)	1	3

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Biological Conditions Continued					Pre-Con	Post-Con
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, 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)			1	2	
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	2	
Additional Notes						
<p>Expanded notes for question 1: Stream S-E78/E82/R1 has a time of year restriction (TOYR) prohibiting construction between Sep. 15th and March 31st. A waiver has been obtained from the appropriate agencies to allow construction within this timeframe. Dewatering activities and a flume and pump/dam conveyance systems, were utilized throughout the crossing on an as needed basis.</p> <p>11-8-2023 - The top 12 inches of stream substrate between the high water marks were removed and stored in labeled super sacks. The top 12 inches of soil from the 10ft. buffer zone was removed and segregated at the edge of the right of way. Excavation of the trench commenced with the aid of a rock hammer.</p> <p>11-9-2023 – The rock hammer continued to be used during trenching, while welding and x-raying of the stream section of pipe was being completed in an upland area.</p> <p>11-10-2023 - The contractor prepped the trench with sandbag pipe supports before lowering in the stream section of pipe. Welding, x-ray and coating activities took place to tie-in the loose end on the coming-in side of the stream.</p> <p>11-11-2023 - Welding, x-ray and coating activities continued on the going away side (GAS) of the stream with the installation of a pup joint.</p> <p>11-13-2023 - Welding and x-ray activities continued on the GAS of the stream with the loose end and pup joint being tied in.</p> <p>11-14-2023 – With the completion of x-ray and coating activities, two bentonite trench breakers were installed at station number 4320+19 & 4320+35. Test leads were installed prior to padding the pipe, and backfilling portions of the trench.</p> <p>11-15-2023 – Once backfilling was completed, the stream bank 10ft. buffer zone and the top 12" of the stream substrate were restored. All contours and elevations were verified by survey to pre-construction specifications. The appropriate permanent seed mix and erosion control devices in accordance with Appendix B: Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration, and Mitigation Framework were applied prior to restoring stream flow.</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>						
Name		Signature		Company		
Brian Montgomery				SWCA		
				Date		
				11/15/2023		

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Required Photos					
					
GPS Location	See photo	GPS Location	See photo		
Description	Downstream view of permitted impact area during pre-construction assessment.	Description	Downstream view of unimpacted area during pre-construction assessment.		
					
GPS Location	See photo	GPS Location	See photo		
Description	Downstream view of permitted impact area during post-construction assessment.	Description	Downstream view of unimpacted area during post-construction assessment.		
					
GPS Location	See photo	GPS Location	See photo		
Description	Energy dissipating spillway for the dam and pump around.	Description	Segregating topsoil from the 10ft. buffer zone on the going away side of the stream.		

Optional Photos		
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GPS Location	See photo	GPS Location	See photo
Description	Removing the top 12 inches of stream bed substrate and storing it in super sacks.	Description	Segregating topsoil of the 10ft. buffer zone from the coming in side of the stream.
			
GPS Location	See photo	GPS Location	See photo
Description	Replacing the stream bed substrate.	Description	Survey verifying elevations of the stream.
			
GPS Location	See photo	GPS Location	See photo
Description	Replacing the topsoil using a shaker bucket to create an optimal seedbed.	Description	installing curlex after broadcasting the permanent seed mix.