



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread D	<b>AFE</b>	124300132	<b>Spread</b>	H-600 Pipeline Spread D
<b>Contractor</b>	Precision	<b>Report #</b>	311		
<b>Environmental Auditor</b>	Gary Cruz	<b>Date/Time</b>	10/20/2023 2:34 PM		
<b>Stream ID</b>	S-J24n	<b>Crossing Start Date</b>	10/17/2023	<b>Crossing Completion Date</b>	10/24/2023
<b>Milepost</b>	120.45	<b>Pre-Con Assessment Date</b>	10/17/2023	<b>Post-Con Assessment Date</b>	10/25/2023
<b>Station</b>	6359+62	<b>Bankfull Width (ft.)</b>	15.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Perennial		
<b>County</b>	Nicholas	<b>303(d) Impairment Listing</b>	pH		

### 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

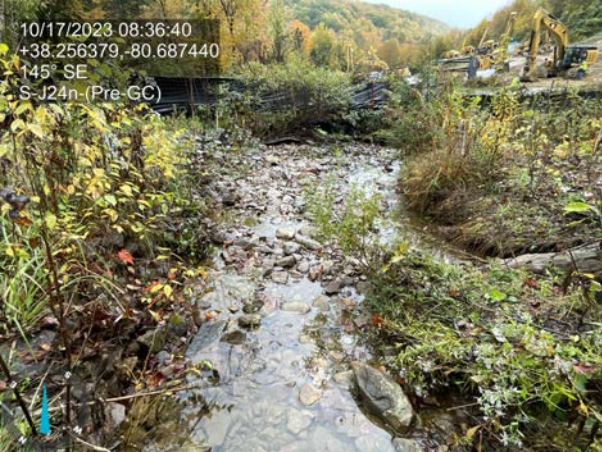





### Biological Conditions

		Pre-Con	Post-Con
15	<b>Predominant Substrate Type (select one):</b> Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay	Cobble (2-10")	Cobble (2-10")
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)	1	2
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.)	1	4







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<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)			1	2	
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)			1	2	
<b>Additional Notes</b>						
<p>Expanded notes for question 1: Stream S-J24n has a time of year restriction (TOYR) prohibiting construction between Sept. 15th to March 31st. A waiver has been obtained from the appropriate agencies to allow construction within this window.</p> <p>10/17/2023 - A dam and pump conveyance system was established prior to the removal of the surface rocks in the stream channel which were stockpiled on geotextile fabric. The top 12" of substrate between the high water marks was segregated and stockpiled on geotextile fabric. The contractor excavated the ditch line and lowered-in the section of pipe for the stream. A flume pipe was installed at the end of the day for overnight conveyance of the stream. The flume was used throughout the crossing on an as needed basis.</p> <p>10/18/2023 - No construction activities were conducted within stream S-J24n. A tie-in weld was made in the upland area of S-J25 on the going away side (GAS), while backfilling began on the coming in side (CIS) of stream S-J25.</p> <p>10/19/2023 - The tie-in weld on the GAS of S-J24s was made and the contractor continued to backfill the upland trench on CIS and GAS of S-J25. Impervious trench breakers were installed on the CIS and GAS of S-J25 at station numbers 6357+97 &amp; 6358+36 respectively, while river weights were installed on the CIS and GAS of the S-J24n and S-J24s at station numbers 6359+46 &amp; 6359+77 respectively. Using stream subsoil the contractor padded the pipe and backfilled the stream to within 12" of grade on S-J25.</p> <p>10/20/2023 - No construction activities were conducted due to a rain out.</p> <p>10/21/2023 – Only dewatering activities were conducted at S-J24n. No construction activities were conducted within S-J24n due to the crew relocating equipment to a new crossing (S-J22) on Canvas Nettie Rd.</p> <p>10/22/2023 - The contractor dewatered the ditch line and installed impervious trench breakers on the CIS and GAS of the stream at station numbers 6359+32 &amp; 6359+86 respectively.</p> <p>10/23/2023 - Most of the day was spent dewatering S-J24n &amp; S-J24s while jeeping and coating was conducted on the GAS of S-J24s. Using subsoil the contractor padded the pipe and backfilled the trench to within 12" from top of grade for S-J24n and S-J24s.</p> <p>10/24/2023 – Stream S-J24n substrate and bedrock was replaced and survey verified that all elevations and contours met pre-construction specifications. Erosion control devices were installed on the boundaries of the stream and the proper seed mix was applied before reestablishing flow to the stream.</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>		
Gary Cruz				SWCA		
				<b>Date</b>		
				10/25/2023		

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**Required Photos**

			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<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 above	<b>GPS Location</b>	See photo above
<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 above	<b>GPS Location</b>	See photo above
<b>Description</b>	Downstream view of permitted impacted area during pre-construction assessment.	<b>Description</b>	Contractor removing the surface rock from the stream bed.

**Optional Photos**

			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Ditch line excavated through the feature.	<b>Description</b>	Lowered-in section of pipe for the stream.
			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Installed river weights.	<b>Description</b>	The impervious trench breakers on coming in side of the stream.
			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Contractor backfilled trench with subsoil within 12" from top of grade.	<b>Description</b>	Survey verifying that all elevations and contours met pre-construction specifications.