



# 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>	288		
<b>Environmental Auditor</b>	Gary Cruz	<b>Date/Time</b>	10/2/2023 8:13 PM		
<b>Stream ID</b>	S-J28	<b>Crossing Start Date</b>	10/2/2023	<b>Crossing Completion Date</b>	10/11/2023
<b>Milepost</b>	119.93	<b>Pre-Con Assessment Date</b>	10/2/2023	<b>Post-Con Assessment Date</b>	10/11/2023
<b>Station</b>	6332+09	<b>Bankfull Width (ft.)</b>	5.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Intermittent		
<b>County</b>	Nicholas	<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>Yes</u> Mussel Relocation? <u>No</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	3	
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>						
Expanded notes for question 1: Stream S-J28 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.						
10/2/2023 - A pump and dam conveyance system was established prior to the removal of all large signature boulders, which were stockpiled separately. The surface rocks that comprise of three shelves in the stream channel were segregated and stockpiled into their own super sacks. The top 12" of substrate between the high-water marks was segregated and stockpiled on geotextile fabric. The blasting crew drilled test holes and determined that blasting was not needed. A flume pipe was installed at the end of the day for overnight conveyance of the stream. The flume and pump/dam conveyance systems were used throughout the crossing on an as needed basis.						
10/3/2023 - No construction activities were conducted within the stream feature. The contractor lowered-in a section of pipe in the upland area on the going away side (GAS) of the feature to make tie-in welds.						
10/4/2023 - Contractor excavated the ditch line and lowered-in the section of pipe within the stream.						
10/5/2023 - No construction activities were conducted within the stream feature. The contractor completed the tie-in welds on the GAS of the stream in the upland area, while excavation of the trench outside of the stream on the coming in side (CIS) continued.						
10/6/2023 – No construction activities were conducted within the stream feature. The contractor started the tie-in welds on the CIS of the stream in the upland area, while backfilling operations started in the upland area on the GAS of the stream.						
10/7/2023 – No construction activities were conducted within the stream feature. The contractor continued the tie-in welds on the CIS of the stream in the upland area, while backfilling operations continued in the upland area on the GAS of the stream.						
10/9/2023 - No construction activities were conducted within the stream feature. The contractor continued the tie-in welds on the CIS of the stream in the upland area.						
10/10/2023 - Trench breakers were installed on the CIS and GAS of the stream at station number 6332+90 & 6331+95 respectively. Using subsoil, the contractor padded the pipe and started backfilling the trench.						
10/11/2023 – Backfilling of the trench was completed using subsoil to within 12" from top of grade. The stream topsoil was replaced and the compiled rock from the three shelves were installed back to their original positions within the stream. Survey verified that all elevations and contours met pre-construction specifications. Erosion control devices were installed on the CIS boundary of the stream only due to W-J8 abutting the GAS of the stream crossing. The proper seed mix was applied to the disturbed areas of the stream and the stream flow was re-established.						
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.						
<b>Name</b>		<b>Signature</b>		<b>Company</b>		<b>Date</b>
Gary Cruz				SWCA		10/11/2023







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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>	Downstream view of contractor removing top 12" of substrate.

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**Optional Photos**

			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Contractor excavated ditch line within the stream.	<b>Description</b>	Section of pipe has been laid within the ditch line of stream.
			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Impervious trench breaker has been installed at 6331+95.	<b>Description</b>	Operator padding the ditch line within the feature.
			
<b>GPS Location</b>	See photo above	<b>GPS Location</b>	See photo above
<b>Description</b>	Survey shooting the grade of stream to original elevation.	<b>Description</b>	Contractor has finished building the contours to its original state according to survey.