



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread F	<b>AFE</b>	124300135	<b>Spread</b>	H-600 Pipeline Spread F
<b>Contractor</b>	Price Gregory	<b>Report #</b>	328		
<b>Environmental Auditor</b>	Allyson Kincaid	<b>Date/Time</b>	10/30/2023 9:48 AM		
<b>Stream ID</b>	S-119	<b>Crossing Start Date</b>	11/1/2023	<b>Crossing Completion Date</b>	11/11/2023
<b>Milepost</b>	163.00	<b>Pre-Con Assessment Date</b>	10/31/2023	<b>Post-Con Assessment Date</b>	11/11/2023
<b>Station</b>	8606+40	<b>Bankfull Width (ft.)</b>	18.1	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Perennial		
<b>County</b>	Summers	<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 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	Bedrock, Boulder (>10")	Bedrock, Boulder (>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	1
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	3

<b>AFE</b>	124300135	<b>Date/Time</b>	10/30/2023 9:48 AM	<b>Report #</b>	328	
<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	1	
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>Pre-Construction Notes  Pre-Construction Meeting - 10/30/2023  Substrate consists of large boulder and large/medium cobble resting on a bedrock. Boulder along left descending bank (LDB) will be removed as best as possible to be able to reestablish the bank within the OHWM to the best ability. Steady flow throughout permitted resource area. Suitable good habitat, with vegetated stable banks. No aquatic life observed during assessment.</p> <p>11/1/2023 - Upstream dam constructed for pump-around system. Topsoil removed to construct a second to help contain seepage from upstream dam where channel is not uniform due to large substrate type. Pump-around system started. Stream substrate and topsoil excavated (Photo 1), segregated, and stored in upland area. Large rock, primarily boulders removed and segregated. Site prepped for drilling. Drilling then blasting occurred. Flume installed.</p> <p>11/2/2023-11/3/2023 - No trenching or work in aquatic resource area. Pipe transported to above aquatic resource area (Photo 2) where pipe was cut, welded, x-rayed, sand blasted, and coated (outside resource area), in position, but above the yet to be excavated trench.</p> <p>11/4/2023 - Pipe removed from surface of resource area. Flume removed. pump-around system utilized. Excavation began in trench (Photo 3).</p> <p>11/6/2023 - Flume removed. Pump-around system utilized. Excavation of trench continued. Support for pipe placed in trench. Pipe placed in trench through aquatic resource area (Photo 4). Welding in trench outside of aquatic resource area.</p> <p>11/7/2023 - Pumping from trench in aquatic resource area. Welding and x-ray ongoing outside of aquatic resource area.</p> <p>11/8/2023 - Pumping from trench in aquatic resource area. Construction of trench breakers. Placement of river weights in trench in aquatic resource area (Photo 5). Adding padding dirt (Photo 6). Backfilling in aquatic resource area (Photo 7).</p> <p>11/9/2023 - Additional padding dirt added to trench. Completed trench breakers. Begin contouring. Survey onsite to provide elevation data (Photo 8). Survey data incomplete - survey will return to confirm elevations. Secondary dam removed. Restored large rock. Restored stream substrate. Seeding and placing curlex in buffer. Removed upstream and downstream dams. Boulder compaction to aid flow restoration.</p> <p>11/10/2023 - Rained out.</p> <p>11/11/2023 - Minor clean up/hand work. Survey onsite. Elevation data confirmed. Resource staked out OHWM and confirmed elevations used to restore aquatic resource was correct. Flow has been restored. Post assessment completed.</p> <p>Post Construction Notes  16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative cover has been achieved and areas that do not have 80% vegetative cover within 30 days will be reseeded.  19. Does not include timber mats that remain in place for travel lane.</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>		
Allyson Kincaid				POTESTA		
				<b>Date</b>		
				11/11/2023		

AFE	124300135	Date/Time	10/30/2023 9:48 AM	Report #	328
<b>Required Photos</b>					
 <p><small>Date &amp; Time: Sun Oct 31 2023 at 12:18:00 EDT Position: 437.772119, -80.232722 (-2.15m) Altitude: 2545ft (-41.6ft) Datum: WGS-84 Azimuth Bearing: 297.866W 527mils True (-12) Elevation Angle: 11.6 Horizon Angle: 11.6 Zoom: 1.0X S119 Edge DS View Mountain Valley Pipeline</small></p>		 <p><small>Date &amp; Time: Sun Oct 31 2023 at 12:50:50 EDT Position: 437.772124, -80.232958 (-2.37m) Altitude: 2545ft (-41.6ft) Datum: WGS-84 Azimuth Bearing: 297.866W 527mils True (-12) Elevation Angle: 11.6 Horizon Angle: 11.6 Zoom: 1.0X S119 DS Edge DS View Mountain Valley Pipeline</small></p>			
<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.		
 <p><small>Date &amp; Time: Sat Nov 11 2023 at 13:27:30 EST Position: 437.772060, -80.232911 (-2.36m) Altitude: 2546ft (-41.6ft) Datum: WGS-84 Azimuth Bearing: 297.863W 528mils True (-12) Elevation Angle: -17.9 Horizon Angle: -17.9 Zoom: 1.0X S119 Upstream, downstream view Mountain Valley Pipeline</small></p>		 <p><small>Date &amp; Time: Sat Nov 11 2023 at 13:31:11 EST Position: 437.772124, -80.232958 (-2.37m) Altitude: 2545ft (-41.6ft) Datum: WGS-84 Azimuth Bearing: 298.874W 508mils True (-12) Elevation Angle: 24.5 Horizon Angle: 24.5 Zoom: 1.0X S119 Downstream Mountain Valley Pipeline</small></p>			
<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.		
 <p><small>Date &amp; Time: Wed Nov 08 2023 at 10:03:00 EDT Position: 437.772036, -80.232911 (-2.36m) Altitude: 2541ft (-40.8ft) Datum: WGS-84 Azimuth Bearing: 298.866W 524mils True (-12) Elevation Angle: -18.6 Horizon Angle: -18.6 Zoom: 1.0X S119 Stream substrate removal Mountain Valley Pipeline</small></p>		 <p><small>Date &amp; Time: Thu Nov 02 2023 at 13:33:00 EDT Position: 437.792715, -80.209609 (-2.0959m) Altitude: 2594ft (-40.8ft) Datum: WGS-84 Azimuth Bearing: 287.878W 5013mils True (-12) Elevation Angle: 14.5 Horizon Angle: 14.5 Zoom: 1.0X S119 pipe over source for welding purposes within 100' buffer Mountain Valley Pipeline</small></p>			
<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo		
<b>Description</b>	Photo 1: Removing stream substrate.	<b>Description</b>	Photo 2: Pipe above ground in aquatic resource area where was welded to additional sections prior to placement.		

<b>Optional Photos</b>					
------------------------	--	--	--	--	--



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 3: Trenching through aquatic resource area.	<b>Description</b>	Photo 4: Lowering pipe into trench.



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 5: Constructing trench breakers and adding river weights in aquatic resource area.	<b>Description</b>	Photo 6: Sifting padding dirt in aquatic resource area.



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 7: Backfilling in aquatic resource area.	<b>Description</b>	Photo 8: Survey marking contour elevations.