



# Stream Biological Conditions EA Report


<b>Project Name</b>	H-600 Pipeline Spread E	<b>AFE</b>	124300134	<b>Spread</b>	H-600 Pipeline Spread E
<b>Contractor</b>	Price Gregory	<b>Report #</b>	39		
<b>Environmental Auditor</b>	Allyson Kincaid	<b>Date/Time</b>	8/15/2023 9:28 AM		
<b>Stream ID</b>	S-H88	<b>Crossing Start Date</b>	8/16/2023	<b>Crossing Completion Date</b>	8/28/2023
<b>Milepost</b>	130.36	<b>Pre-Con Assessment Date</b>	8/15/2023	<b>Post-Con Assessment Date</b>	8/28/2023
<b>Station</b>	6883+01	<b>Bankfull Width (ft.)</b>	17.0	<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>	None		

### Resource Post-Crossing Conditions

1	Were all applicable resource specific crossing conditions satisfied?	Yes
	Time of Year Restrictions (TOYR)? <u>  N/A  </u> Mussel Relocation? <u>  N/A  </u>	
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?	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)?	No
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.	See Below

### 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	4
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

<b>AFE</b>	124300134	<b>Date/Time</b>	8/15/2023 9:28 AM	<b>Report #</b>	39	
<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  *Bankfull width measured at OHWM stakes  15. Substrate is composed of larger material with fines interspersed, flow present.  18. Pre-Con - Timber mat present (travel lane)  Pre-Construction Meeting @ 1000 (8/15/2023)  Pre-Construction Assessment Completed; EI for Crossing is Johnny Graham</p> <p>Day 1 (8/16/2023)  Stream substrate removed (Photo 1) and segregated in upland area (Photo 2). Blasting occurred after substrate removed.</p> <p>Day 2 and Day 3 (8/17/2023 and 8/18/2023)  Excavating trench (Photo 3), hammering, and pumping from the trench.</p> <p>Day 4 (8/19/2023)  Lowering pipe into trench.</p> <p>Day 5 (8/21/2023)  Aligning pipe in trench, welding, and sifting soft fill dirt into the trench.</p> <p>Days 6, 7, and 8 (8/22/2023 - 8/24/2023)  Additional digging of trench and welding outside riparian buffer, sifting of soft fill dirt into the trench. Trench breaks on both banks installed and stream trench filled (Photos 5 and 6).</p> <p>Day 9 (8/25/2023)  Significant early morning storm event. Day spent maintaining erosion control, dewatering trench, maintaining pumps, etc.</p> <p>Day 10 (8/26/2023)  Pumping from trench, general repair work from Friday's storm. Restoring riparian corridor on RDB including streambed. Survey of restored stream channel.</p> <p>Day 11 (8/27/2023)  Placement of segregated substrate back into stream channel (Photo 7). Continued pumping of trench. Ongoing back filling and soft fill dirt into trench. Seeding of banks and riparian corridor on RDB. Restoring flow.</p> <p>Day 12 (8/28/2023)  Complete bank restoration on LDB (Photo 8). Stream flowing. Post Construction Assessment Completed.</p> <p>Post Construction Notes  14. During overnight trench dewatering of the stream crossing, the dewatering structure was inadvertently overtopped allowing sediment to leave the right-of-way and eventually settle within an adjacent wetland. This was immediately reported to the WVDEP. The area was cleaned up and restored the same day.  16., 17. Crossing and riparian areas have been recently restored. These areas will be monitored until 80% vegetative coverage 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>		<b>Date</b>
Allyson Kincaid				Potesta		8/28/2023









<b>AFE</b> 124300134	<b>Date/Time</b> 8/15/2023 9:28 AM	<b>Report #</b> 39
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**Required Photos**

 <p><small>Date &amp; Time: Tue, Aug 15, 2023 at 09:31:22 EDT Position: +038 134733 / -080 730726 (±22.6ft) Altitude: 2418ft (±45.4ft) Datum: WGS 84 Azimuth Bearing: 091° 58'E 1653mils True (±11°) Elevation Angle: +02.2° Horizon Angle: +02.2° Zoom: 1.0X S-H88 US edge DS view Mountain Valley Pipeline</small></p>	 <p><small>Date &amp; Time: Tue, Aug 15, 2023 at 09:35:09 EDT Position: +038 134738 / -080 730419 (±19.5ft) Altitude: 2424ft (±43.0ft) Datum: WGS 84 Azimuth Bearing: 091° 58'E 1653mils True (±11°) Elevation Angle: +02.2° Horizon Angle: +02.2° Zoom: 1.0X S-H88 US 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: Mon, Aug 28, 2023 at 10:56:22 EDT Position: +038 134768 / -080 730769 (±31.7ft) Altitude: 2415ft (±45.0ft) Datum: WGS 84 Azimuth Bearing: 086° N84E 1529mils True (±13°) Elevation Angle: +02.9° Horizon Angle: +02.9° Zoom: 1.0X S-H88 US edge DS view Mountain Valley Pipeline</small></p>	 <p><small>Date &amp; Time: Mon, Aug 28, 2023 at 10:58:37 EDT Position: +038 134716 / -080 730437 (±25.5ft) Altitude: 2407ft (±51.1ft) Datum: WGS 84 Azimuth Bearing: 091° 58'E 1653mils True (±12°) Elevation Angle: +02.9° Horizon Angle: +02.9° Zoom: 1.0X S-H88 US 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 post-construction assessment. Rain occurring during photo	<b>Description</b> Downstream view of unimpacted area during post-construction assessment. Rain occurring during photo
 <p><small>Date &amp; Time: Wed, Aug 16, 2023 at 13:32:49 EDT Position: +038 134727 / -080 730490 (±22.0ft) Altitude: 2407ft (±51.1ft) Datum: WGS 84 Azimuth Bearing: 150° S30E 2667mils True (±12°) Elevation Angle: +01.7° Horizon Angle: +02.2° Zoom: 1.0X S-H88 OHWM topsoil being removed Mountain Valley Pipeline</small></p>	 <p><small>Date &amp; Time: Wed, Aug 16, 2023 at 17:54:51 EDT Position: +038 134617 / -080 730461 (±35.8ft) Altitude: 2447ft (±68.1ft) Datum: WGS 84 Azimuth Bearing: 150° S30E 2667mils True (±12°) Elevation Angle: +01.7° Horizon Angle: +02.2° Zoom: 1.0X S-H88 OHWM topsoil containment Mountain Valley Pipeline</small></p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo coordinates
<b>Description</b> Photo 1. Stream substrate being removed.	<b>Description</b> Photo 2. Stream substrate segregated in upland area.



<b>Optional Photos</b>		
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 <p><small>Date &amp; Time: Sat, Aug 19, 2023 at 13:26:09 EDT Position: +038.157973 / -080.694988 (-11387.5ft) Altitude: 2418ft (+101.6ft) Datum: WGS-84 Azimuth/Bearing: 166.514E 2951mils True (+12) Elevation Angle: -08.7 Horizon Angle: +01.9 Zoom: 1.0X S-H88 sandbagging stream area of RDB Mountain Valley Pipeline</small></p>	 <p><small>Date &amp; Time: Sat, Aug 19, 2023 at 15:18:01 EDT Position: +038.136951 / -080.730436 (-1133.6ft) Altitude: 2204ft (+85.2ft) Datum: WGS-84 Azimuth/Bearing: 210.530W 270mils True (+15) Elevation Angle: -08.1 Horizon Angle: +01.5 Zoom: 1.0X S-H88 sandbagging pump around the pipe to set up Mountain Valley Pipeline</small></p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 3. Trench through stream OHRM.	<b>Description</b> Photo 4. Pipe being placed into trench.
 <p><small>Date &amp; Time: Wed, Aug 23, 2023 at 13:44:36 EDT Position: +038.153563 / -080.690752 (+9272.1ft) Altitude: 2410ft (+84.7ft) Datum: WGS-84 Azimuth/Bearing: 166.508W 293mils True (+14) Elevation Angle: -08.2 Horizon Angle: +01.1 Zoom: 1.0X S-H88 trench breaks put in stream section of trench Mountain Valley Pipeline</small></p>	 <p><small>Date &amp; Time: Thu, Aug 24, 2023 at 12:27:02 EDT Position: +038.137076 / -080.730507 (-1357.5ft) Altitude: 2252ft (+83.0ft) Datum: WGS-84 Azimuth/Bearing: 172.512W 343mils True (+12) Elevation Angle: -08.3 Horizon Angle: +01.3 Zoom: 1.0X S-H88 trench breaks being installed LDB Mountain Valley Pipeline</small></p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 5. Trench breaks installed on RDB.	<b>Description</b> Photo 6. Streambed portion of trench backfilled, trench breakers on LDB.
 <p><small>Date &amp; Time: Sun, Aug 27, 2023 at 08:18:59 EDT Position: +038.136751 / -080.730566 (-1102.1ft) Altitude: 2295ft (+89.0ft) Datum: WGS-84 Azimuth/Bearing: 236.556W 244mils True (+13) Elevation Angle: -08.8 Horizon Angle: +01.3 Zoom: 1.0X S-H88 part of Day 1 Mid-Crossing Excavation Upstream Mountain Valley Pipeline</small></p>	 <p><small>Date &amp; Time: Mon, Aug 28, 2023 at 12:20:32 EDT Position: +038.136527 / -080.730580 (-124.0ft) Altitude: 2305ft (+92.1ft) Datum: WGS-84 Azimuth/Bearing: 094.694E 102mils True (+15) Elevation Angle: -8.5 Horizon Angle: +01.3 Zoom: 1.0X S-H88 Slope 36 buffer Mountain Valley Pipeline</small></p>
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 7. Streambed substrate restored.	<b>Description</b> Photo 8. Banks seeded and flow restored.