



# Wetland Biological Conditions EA Report

<b>Project Name</b>	H-600 Pipeline Spread E	<b>A/E</b>	124300134	<b>Spread</b>	H-600 Pipeline Spread E
<b>Contractor</b>	Price Gregory	<b>Report #</b>	27		
<b>Environmental Auditor</b>	Tim Ferguson			<b>Date/Time</b>	8/22/2023 8:28 AM
<b>Wetland ID</b>	W-L16	<b>Crossing Start Date</b>	8/24/2023	<b>Crossing Completion Date</b>	9/13/2023
<b>Milepost</b>	144.36	<b>Pre-Con Assessment Date</b>	8/22/2023	<b>Post-Con Assessment Date</b>	9/13/2023
<b>Station</b>	7622+21	<b>Cowardin Classification</b>	PEM	<b>Wetland Impact Area(acres)</b>	0.0247
<b>State</b>	WV				
<b>County</b>	Greenbrier				

### Resource Post-Crossing Conditions

1	Were equipment mats or other suitable methods utilized under heavy equipment to minimize soil compaction and disturbance in wetlands?	Yes
2	Was the existing vegetation removed prior to initiating land disturbance within the resource?	Yes
3	Was the top 1-foot (12-inches) of wetland soil segregated and stockpiled separate from trench spoils?	Yes
4	Was excess material not needed for backfill removed and disposed of in an upland area?	Yes
5	Was the top 12-inches of backfill made with clean native wetland topsoil?	Yes
6	Were standard decompaction practices (disking, plowing, cultivating, tilling, or incorporation of organic matter into the topsoil horizon) implemented prior to applying seed?	Yes
7	Was wetland topsoil replaced and temporarily seeded?	Yes
8	Was permanent seed applied to unsaturated wetlands?	Yes
9	Was equipment/timber matting removed from the wetland area properly by vertically lifting, and not pulling through the impact area?	Yes
10	Were impervious trench breakers/plugs properly installed within 25-feet of the resource to prevent subsurface erosion to or from the resource area?	Yes
11	Was the pre-construction survey data utilized during restoration in attempt to maintain the original surface hydrology, and were contours re-established to pre-construction conditions to maintain overland flow patterns?	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	Was the time of disturbance minimized by conducting resource work continuously to completion?	Yes
14	Does the post-construction square footage of wetland area appear to be restored to meet or exceed the pre-construction area square footage?	Yes
15	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30) in PFO classified wetlands?	N/A
16	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
17	<b>Wetland Saturation:</b> Are surface waters, the water table, and/or overall soil saturation present? (Select Yes or No)	Yes		Yes
18	<b>Resource Alterations:</b> Are the wetland soil conditions visibly disturbed? <b>Examples:</b> Livestock presence, haul roads, farm traffic, drain tiles, recent mowing/clear cutting, recent excavating/disking of soils, etc. <b>Rating:</b> 1-Negligible (undisturbed/natural resource), 2-Minor (20-40% of resource disturbed by alterations), 3-Moderate (40-80% of resource disturbed), 4-Poor (>80% of resource disturbed)	1		4
19	<b>Is vegetation present within the permitted impact area prior to disturbance? (Pre-Con) Are areas properly seeded and stabilized after restoration? (Post-Con)</b> <b>Rating:</b> 1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetative coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetative coverage, etc.)	2		4

<b>AFE</b> 124300134	<b>Date/Time</b> 8/22/2023 8:28 AM	<b>Report #</b> 27
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**Additional Notes**

Pre-Construction Notes  
 Pre-Construction Meeting - (8/21/2023 @ 1000)  
 Pre-Construction Assessment Completed (8/22/2023)  
 17. Wetland soils were saturated. Test pit recharged to within less than an inch of the soil surface.

Day 1 (8/24/2023)  
 Wetland topsoil was removed from W-L16 (Photo 1) and segregated in upland area (Photo 2).

Day 2 (8/25/2023)  
 Heavy rain - no work (0.52")

Day 3 and Day 4 (8/26/2023 and 8/27/2023)  
 Trenching began in aquatic resources (Photo 3).

Day 5 through Day 8 (8/28/2023-8/31/2023)  
 Work occurred outside the resource including trenching, pumping, welding, blasting, sand blasting, and other maintenance activities. Rain event occurred on 8/28/2023.

Day 9 and Day 10 (9/1/2023 and 9/2/2023)  
 Trench prepared for pipe installation and pipe lowered into trench in aquatic resources (Photo 4). Welding and x-ray ongoing in trench.

Holiday Weekend - No work 9/3/2023 and 9/4/2023

Day 11 through Day 14 (9/5/2023-9/8/2023)  
 Work occurred outside the resource including trenching, pumping, welding, blasting, sand blasting, padding, lowering the pipe into the trench, and other maintenance activities.

Day 15 (9/9/2023)  
 Began backfilling. Day called due to thunderstorms.

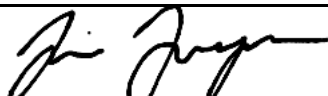
Day 16 (9/11/2023)  
 Began to installed trench breakers adjacent to resource.

Day 17 (9/12/2023)  
 Finished installing trench breakers (Photo 5) and filling resource. Site graded. Survey work began.


Day 18 (9/13/2023)  
 Survey staked out stream boundary and elevations. Wetland topsoil was placed in resource area (Photo 6) and then restored using hand tools (Photo 7). Curlex installed (Photo 8). Resource crossing complete. Post Construction Form completed.

Post Construction Notes  
 17. Water did not recharge in post construction test pit; however, soils were saturated when examined.  
 18. 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.  
 Timber mat remains in place for travel lane.

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.

Name	Signature	Company	Date
Tim Ferguson		Potesta & Associates, Inc.	9/13/2023

<b>Required Photos</b>	
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<p><small>Date &amp; Time: Tue, Aug 22, 2023 at 08:35:58 EDT Position: +037.9806817, -080.754973 (-2523.3ft) Altitude: 240.0ft (+105.5m) Datum: WGS 84 Azimuth Bearing: 135.545E 9200mils True (+14) Elevation Angle: 10.5 Horizon Angle: 10.5 Zoom: 1.0X Site: W-L16 - Impact area pre-construction assessment Mountain Valley Pipeline</small></p> 	<p><small>Date &amp; Time: Tue, Aug 22, 2023 at 08:37:00 EDT Position: +037.9806597, -080.754824 (-2523.1ft) Altitude: 237.4ft (+104.5m) Datum: WGS 84 Azimuth Bearing: 141.589E 2997mils True (+12) Elevation Angle: 11.1 Horizon Angle: 10.6 Zoom: 1.0X Site: W-L16 - Unimpacted area pre-construction assessment Mountain Valley Pipeline</small></p> 
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> View of permitted resource impact area during pre-construction assessment.	<b>Description</b> At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment.
<p><small>Date &amp; Time: Wed, Sep 13, 2023 at 17:16:51 EDT Position: +037.9807817, -080.754947 (-2502ft) Altitude: 240.0ft (+105.1ft) Datum: WGS 84 Azimuth Bearing: 171.509E 3900mils True (+12) Elevation Angle: 12.2 Horizon Angle: 12.2 Zoom: 1.0X Stream/Wetland overview - post-construction MVP - S-L26/W-L16</small></p> 	<p><small>Date &amp; Time: Wed, Sep 13, 2023 at 17:17:52 EDT Position: +037.9806867, -080.754783 (-2501ft) Altitude: 202.0ft (+90m) Datum: WGS 84 Azimuth Bearing: 155.5154E 3510mils True (+12) Elevation Angle: 10.5 Horizon Angle: 10.2 Zoom: 1.0X At edge of LOD, view of unimpacted resource area conditions - post-construction MVP - S-L26/W-L16</small></p> 
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> View of permitted resource impact area during post-construction assessment.	<b>Description</b> At edge of LOD, view of unimpacted resource area conditions during post-construction assessment.
<p><small>Date &amp; Time: Thu, Aug 24, 2023 at 14:50:11 EDT Position: +037.9807207, -080.754819 (-2514.0ft) Altitude: 240.0ft (+105.5ft) Datum: WGS 84 Azimuth Bearing: 320.5689mils True (+11) Elevation Angle: 22.7 Horizon Angle: 10.5 Zoom: 1.0X Top 12 - Wetland soil removal MVP - S-L26/W-L16</small></p> 	<p><small>Date &amp; Time: Thu, Aug 24, 2023 at 17:25:57 EDT Position: +037.9810767, -080.784737 (-19.5ft) Altitude: 240.0ft (+105.5ft) Datum: WGS 84 Azimuth Bearing: 320.5689mils True (+11) Elevation Angle: 13.3 Horizon Angle: 10.4 Zoom: 1.0X Segregated stream and wetland topsoils MVP - S-L26/W-L16</small></p> 
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 1: Removal of wetland soil at W-L16.	<b>Description</b> Photo 2: Wetland soil segregated in upland area.

<b>Optional Photos</b>		
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<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 3: Trenching through aquatic resources.	<b>Description</b> Photo 4: Pipe lowered into aquatic resources.



<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 5: Constructing trench breaks.	<b>Description</b> Photo 6: Restoring Wetland Soil.



<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 7: Distributing wetland soil by hand.	<b>Description</b> Photo 8: Installing Curlex.