



# Wetland 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>	81		
<b>Environmental Auditor</b>	Jessica Yeager			<b>Date/Time</b>	10/10/2023 11:20 AM
<b>Wetland ID</b>	W-K7	<b>Crossing Start Date</b>	10/11/2023	<b>Crossing Completion Date</b>	11/6/2023
<b>Milepost</b>	154.80	<b>Pre-Con Assessment Date</b>	10/10/2023	<b>Post-Con Assessment Date</b>	11/6/2023
<b>Station</b>	8173+44	<b>Cowardin Classification</b>	PEM	<b>Wetland Impact Area(acres)</b>	0.3206
<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?	N/A
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?	No
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.	N/A

### 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)	No		No
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.)	1		1

<b>AFE</b> 124300135	<b>Date/Time</b> 10/10/2023 11:20 AM	<b>Report #</b> 81
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**Additional Notes**

**Pre-Construction Notes**

Pre-Construction Meeting - 10-9-2023 @ 1300

EI - Andrew Hopson

Pre-Construction Assessment Completed (10/10/2023)

17. Pre-Construction - Test pit did not contain water or saturated soils; however, soil was clearly hydric.

18. Pre-Construction - Timber mats in place throughout wetland.

10-11-2023 - Previously trenched under road to edge of aquatic resource. Mats utilized to remove topsoil from northern most portion of the wetland (Photo 1). Topsoil segregated in work area (Photo 2). Begin excavation of subsoil, hammering, and dewatering of trench.

10/12/2023 - Continued trenching in northern most portion of wetland. Removal of additional topsoil. On-going pumping from trench. Removal of subsoil and hammering of rock. Installed trench box. Pipe placed into wetland resource. Began construction of concrete trench breaker at northern end of resource. Sandbag padding added.

10/13/2023 - Concrete trench breaker construction (Photo 3) and pumping water ongoing in trench. Sand added to trench. Filling of trench upgradient of wetland (below road surface and on ROW above road). Trench box moved further into resource. Steel plate inserted in trench at northern end of aquatic resource area. Concrete pumped into gap between trench breakers (under road, outside of aquatic resource area).

10/14/2023-10/18/2023 - Timber mats replaced. Topsoil removed from remainder of resource (Photo 4). Excavating trench from north to south to end of resource. Ongoing pumping and hammering. Sandbag bedding placed in excavated portion of trench. Pipe temporarily placed in trench (10/18/2023).

10/19/2023 - Pumping water on-going in the trench. Loose soil removed from trench. Pipe lowered into trench in resource area (Photo 5). Began welding. Sandbags bedding and soil added to trench for cushion. Second trench box installed (southern end of resource). Steel plates added. Backfilling of the trench initiated.

10/20/2023-10/24/2023 - Pumping water on-going in the trench. Welding, cutting, coating, and sandblasting of pipe. Padding and backfilling of trench in aquatic resource area. Removal of steel plate located adjacent to second trench box (southern end of resource). Trench connected through three aquatic resource W-K7 to S-K17 to W-IJ30. Additional work ongoing outside of aquatic resource area.

10/25/2023 - Pumping water on-going in the trench. Sandbag padding added to trench. Placing pipe that runs from edge of W-K7, through S-K17, to S-IJ30. Additional work ongoing outside of aquatic resource area.

10-26-2023 - Pumping water ongoing in the trench. Welding, x-ray, sandblasting and coating in trench. Stop work due to vehicular accident. Resumed after additional safety discussions. Additional work ongoing outside of aquatic resource area.

10/27/2023 - Pumping water ongoing in the trench. Trench breaker constructed (Photo 6) and backfilling adjacent to aquatic resource. Test stick moved to outside wetland boundary.

10/28/2023 - Pumping water ongoing in the trench. Height added to trench breakers adjacent to aquatic resource. Backfilling of trench in and adjacent to aquatic resource (Photo 7). Survey onsite. Restoration of adjacent aquatic resource initiated.

10/30/2023 - Pumping water ongoing in the trench. Backfilling of trench in and adjacent to aquatic resource. Additional sandbags added to trench breaker on southern end of aquatic resource. Trench box removed from southern portion of aquatic resource.

10/31/2023 - Work ongoing outside of resource area.

11/1/2023 - Work ongoing outside of resource area. Added topsoil to area between wetland and stream resources. Began adding topsoil to aquatic resource area.

11/2/2023 - Removal of road plates at northern end of resource area (adjacent to road). Backfilling upland soil along northern edge of resource area. Grade of this portion of the wetland. Replacing wetland soil in the northern portion of the wetland. Seeding this portion of the wetland. Start to replace wetland mats including placing geotech over topsoil, to aquatic resource area utilized to access work area adjacent to ROW.

11/3/2023 - Continue moving timber mats in resource area (Photo 8) and laying geotech in timber mat area. Restoring topsoil in resource area.

11/4/2023 - Hand working topsoil in wetland area.

11/6/2023 - Final seeding of resource area.


**Post Construction Notes**







17. Water did not recharge in post construction test pit.

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 and work area access.

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
Jessica Yeager		Potesta	11/6/2023

AFE	124300135	Date/Time	10/10/2023 11:20 AM	Report #	81
Required Photos					
 <p><small>Date &amp; Time: Tue, Oct 10, 2023 at 11:22:27 EDT Position: +037.863261° / -080.757264° (-16.7H) Altitude: 242.2ft (-31.4ft) Datum: WGS-84 Azimuth Bearing: 358° N02W 836mils True (+13.1) Elevation Angle: -09.7° Horizon Angle: -01.3° Zoom: 1.0x W-K? Unimpacted Resource Area MVP</small></p>		 <p><small>Date &amp; Time: Tue, Oct 10, 2023 at 11:21:31 EDT Position: +037.863261° / -080.757264° (-16.7H) Altitude: 242.2ft (-31.4ft) Datum: WGS-84 Azimuth Bearing: 291° S89E 1020mils True (+22.5) Elevation Angle: -08.8° Horizon Angle: -00.3° Zoom: 1.0x W-K? Unimpacted Resource Area MVP</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: Mon, Nov 05, 2023 at 17:00:14 EDT Position: +037.863337° / -080.758768° (-16.7H) Altitude: 242.7ft (-38.0ft) Datum: WGS-84 Azimuth Bearing: 020° N02E 0356mils True (+19.7) Elevation Angle: -09.2° Horizon Angle: -01.1° Zoom: 0.2x W-K? Permitted Impact Area post-construction MVP</small></p>		 <p><small>Date &amp; Time: Mon, Nov 05, 2023 at 17:00:59 EDT Position: +037.863337° / -080.758768° (-16.7H) Altitude: 242.7ft (-38.0ft) Datum: WGS-84 Azimuth Bearing: 191° S09E 1280mils True (+19.7) Elevation Angle: -08.2° Horizon Angle: -01.1° Zoom: 0.2x W-K? Unimpacted Resource Area post-construction MVP</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: Wed, Oct 11, 2023, 13:04:03 EDT Position: +037.863953° / -080.758904° (-16.7H) Altitude: 247.7ft (Error) Datum: WGS-84 Azimuth Bearing: 276° N82W 1000mils True (+20.0) Elevation Angle: -00.3° Horizon Angle: -03.2° Zoom: 1.0x W-K? Wetland Topsoil Removal MVP</small></p>		 <p><small>Date &amp; Time: Wed, Oct 11, 2023, 15:07:04 EDT Position: +037.863953° / -080.758904° (-16.7H) Altitude: 247.7ft (Error) Datum: WGS-84 Azimuth Bearing: 191° S09E 1280mils True (+19.7) Elevation Angle: -03.2° Horizon Angle: -03.2° Zoom: 1.0x W-K? Wetland Soil Storage MVP</small></p>			
<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo		
<b>Description</b>	Photo 1: Removal of wetland topsoil in northern portion of the aquatic resource area.	<b>Description</b>	Photo 2: Segregated wetland topsoil.		

<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: Concrete trench breakers under construction, filling trench, and moving trench box and plates.	<b>Description</b>	Photo 4: Removal of topsoil from remaining wetland area.



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 5: Placing and positioning pipe through aquatic resource area.	<b>Description</b>	Photo 6: Downgradient (southern) trench breaker adjacent to aquatic resource.



<b>GPS Location</b>	See Photo	<b>GPS Location</b>	See Photo
<b>Description</b>	Photo 7: Backfilling of aquatic resource.	<b>Description</b>	Photo 8: Replacing timber mats and restoring wetland topsoil.