



# Wetland Biological Conditions EA Report

<b>Project Name</b>	H-600 Pipeline Spread C	<b>AFE</b>	124300131	<b>Spread</b>	H-600 Pipeline Spread C
<b>Contractor</b>	Precision	<b>Report #</b>	69		
<b>Environmental Auditor</b>	Jeffrey Arbogast			<b>Date/Time</b>	9/28/2023 2:43 PM
<b>Wetland ID</b>	W-H66	<b>Crossing Start Date</b>	9/28/2023	<b>Crossing Completion Date</b>	10/21/2023
<b>Milepost</b>	93.20	<b>Pre-Con Assessment Date</b>	9/11/2023	<b>Post-Con Assessment Date</b>	10/21/2023
<b>Station</b>	4920+78	<b>Cowardin Classification</b>	PFO	<b>Wetland Impact Area(acres)</b>	0.2496
<b>State</b>	WV				
<b>County</b>	Webster				

### 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?	Yes
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.)	1		4

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**Additional Notes**

Conditions 18 and 19 were given a post-construction rating of 4 due to the lack of vegetation in the disturbed permitted impact area following completion of the crossing and restoration efforts. The W-H66 PFO topsoil has been properly stabilized and the disturbed area was seeded with the appropriate permanent seed mix in accordance with Appendix B: Restoration Work Plan of the Mountain Valley Pipeline Comprehensive Stream and Wetland Monitoring, Restoration and Mitigation Framework.

The erosion and sediment control plans indicate that the mainline crosses wetland W-H66 from station nos. 4920+78 to 4922+91.

9/28/2023: The top 12" of wetland topsoil was removed from a small section on the going away end of the wetland (Sta. no. 4922+73 to 4922+91) because blasting was scheduled to drill and shoot the ditch line within that section. The silt fence was reinstalled on the perimeter of the wetland.

9/29/2023 - 10/05/2023: Ditch excavation, lowering in, welding, and backfilling continued outside of the wetland boundary as there are multiple resource crossings in the immediate vicinity.

10/06/2023: Wetland topsoil removal and segregation were completed in W-H66. Blasting drilled and shot a short section of the ditch line within the wetland (sta. no. 4922+50 to 4922+73). The silt fence was replaced on the wetland boundary.

10/07/2023: Ditch line excavation entered the going away side (GAS) wetland boundary, working back toward the coming in side (CIS) (station no. 4922+50 to 4922+91). The native wetland subsoil was segregated on geo-tech fabric.

10/09/2023: Another section of the wetland ditch line was drilled and blasted from approximately (sta. no. 4921+50 to 4922+50) before ditch excavation resumed.

10/10/2023: Ditch excavations continued on the GAS of W-H66 back through to the CIS of S-H105 until enough footage was made to lower in a section of pipe (ending sta. no. 4921+50). Once the pipe was welded, x-rayed, and coated it was prepped for backfilling. Two bentonite trench breakers were built on the GAS at 12' and 1' from the wetland boundary as per the survey.

10/11/2023: Ditch excavation continued (sta. no. 4920+78 to 4921+50), a pipe section was lowered in and welded while backfilling began on the opposite end (GAS) of the ditch. This was the last section of pipe within W-H66 until the final tie-in could be made at the CIS wetland boundary.

10/12/2023: Backfilling was completed on the going away end of the wetland crossing (sta. no. 4922+00 to 4922+91). The crew began rebuilding the stream within this wetland (S-H105). Some wetland topsoil was replaced in the process of reconstructing the 10' stream buffers.

10/13/2023: The S-H105 stream crossing was completed, and topsoil replacement was finished on the GAS of the wetland. (sta. no. 4922+29 to 4922+91). The approved permanent seed mix was applied, and a silt fence was installed.

10/14/2023: The day was spent welding up the next pipe section, X-ray testing, coating, and rock shielding pipe in preparation for lowering in. Operators excavated a bell hole at the W-H66 CIS boundary and topsoil was removed from wetland W-H67.

10/16/2023: Excavation continued just outside of wetland (W-H66) within wetland W-H67 and stream S-H108, working back toward the final tie-in point at the CIS boundary of W-H66.


10/17/2023: The last of the ditch line excavation was completed, the tie-in pipe section was lowered, and one weld was made.







10/18/2023: The final weld was made, x-rayed, coated, and rock shields applied while final backfilling was conducted outside of the CIS wetland boundary. The final trench breaker was built 13' from the CIS wetland boundary as per the survey.

10/19/2023: 10/20/2023: Wetland W-H67 and stream S-H108 were completed on the 19th. No construction was conducted on the 20th due to a rainout.

10/21/2023: Backfilling was completed. The topsoil was replaced, and all elevations were verified by civil survey. The approved seed mix was applied before the silt fence was replaced on the wetland boundary.

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
Jeffrey Arbogast		SWCA	10/21/2023

AFE	124300131	Date/Time	9/28/2023 2:43 PM	Report #	69						
Required Photos											
 <p data-bbox="175 191 383 275">09/11/2023 08:43:24 +38.548993,-80.539620 211° SW W-H66 (Pre-JA)</p>		 <p data-bbox="870 191 1078 275">09/28/2023 09:39:52 +38.548600,-80.539649 120° SE W-H66 (Pre-JA)</p>		<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo				
<b>Description</b>	View of permitted resource impact area during pre-construction assessment. Photo taken standing near the centerline, CIS, facing SW.	<b>Description</b>	At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment. Photo taken on left side of LOD facing SE.	 <p data-bbox="175 800 383 884">10/21/2023 17:31:20 +38.549142,-80.539472 190° S W-H66 (Post-JA)</p>		 <p data-bbox="870 800 1078 884">10/21/2023 14:07:34 +38.548666,-80.539614 118° SE W-H66 (Post-JA)</p>		<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	View of permitted resource impact area during post-construction assessment. Photo taken standing near the centerline, CIS, facing SSW.	<b>Description</b>	At edge of LOD, view of unimpacted resource area conditions during post-construction assessment. Photo taken on left side of LOD facing SE.	 <p data-bbox="175 1402 383 1486">09/11/2023 08:51:02 +38.548673,-80.539862 44° NE W-H66 (Pre-JA)</p>		 <p data-bbox="870 1402 1078 1486">10/21/2023 17:33:44 +38.548548,-80.539779 42° NE W-H66 (Post-JA)</p>		<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	Photo taken from the GAS end of the wetland. Pre-Construction.	<b>Description</b>	Photo taken from the GAS end of the wetland. Post-Construction.								

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**Optional Photos**

			
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	Top 12' of wetland topsoil being removed.	<b>Description</b>	Blasting crew preparing to make their last shot within the W-H66 ditch line.
			
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	Digging the last section of ditch in W-H66.	<b>Description</b>	Lowering in the last section of pipe in W-H66.
			
<b>GPS Location</b>	See Caption in Photo	<b>GPS Location</b>	See Caption in Photo
<b>Description</b>	Wetland subsoil being used to backfill the wetland ditch.	<b>Description</b>	Wetland topsoil is being put back on the left side of the photo and sub-grading on the right side of the photo.