
















Wetland Biological Conditions EA Report

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| Project Name | H-600 Pipeline Spread E | A/E | 124300134 | Spread | H-600 Pipeline Spread E | |
| Contractor | Price Gregory | | | Report # | 73 | |
| Environmental Auditor | Charles Haden | | | Date/Time | 10/2/2023 9:47 AM | |
| Wetland ID | W-M20 | Crossing Start Date | 10/4/2023 | Crossing Completion Date | 10/18/2023 | |
| Milepost | 137.05 | Pre-Con Assessment Date | 10/2/2023 | Post-Con Assessment Date | 10/18/2023 | |
| Station | 7236+15 | Cowardin Classification | PEM | Wetland Impact Area(acres) | | |
| State | WV | | | | | |
| County | 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? | | | | N/A | |
| 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? | | | | N/A | |
| 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? | | | | N/A | |
| 10 | Were impervious trench breakers/plugs properly installed within 25-feet of the resource to prevent subsurface erosion to or from the resource area? | | | | N/A | |
| 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. | | | | No | |
| Biological Conditions | | | | | Pre-Con | Post-Con |
| 17 | Wetland Saturation: Are surface waters, the water table, and/or overall soil saturation present? (Select Yes or No) | | | | Yes | No |
| 18 | Resource Alterations: Are the wetland soil conditions visibly disturbed? Examples: Livestock presence, haul roads, farm traffic, drain tiles, recent mowing/clear cutting, recent excavating/disking of soils, etc. Rating: 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) | | | | 2 | 3 |
| 19 | Is vegetation present within the permitted impact area prior to disturbance? (Pre-Con) Are areas properly seeded and stabilized after restoration? (Post-Con) Rating: 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 | 3 |

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| AFE | 124300134 | Date/Time | 10/2/2023 9:47 AM | Report # | 73 |
| Additional Notes | | | | | |
| <p>Pre-Construction Notes</p> <p>Pre-Construction Meeting - 9/18/2023</p> <p>17. Surface water, soil saturation and groundwater recharge observed in soil test pit (Photo 1).</p> <p>10/04/2023 - Contractor developed plans to minimize the impact to the permitted impact area of the wetland resource; however, due to its proximity to the centerline wetland topsoil was removed (Photo 2) Soil segregated and stored in upland area (Photo 3). Resource protected from on-going activities with the installation of P1 fencing (Photo 4).</p> <p>10/05/2023-10/17/2023 - Minimization measures were successfully implemented and other than topsoil removal, wetland resource was not disturbed (Photos 5 and 6). Trenching, hammering, bedding installation, pipe installation, welding, x-ray, sandblasting, coating, the construction of trench breakers, and the backfilling of the trench were all ongoing outside of aquatic resource during this timeframe.</p> <p>10/18/2023 - Wetland topsoil restoration (Photo 7). Survey of elevation and boundary was completed. Seed applied to resource (Photo 8). Silt sock installed around perimeter of the restored wetland resource.</p> <p>Post Construction Notes</p> <p>17. Water did not recharge in post construction test pit.</p> <p>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.</p> <p>Trenching did not occur in resource so Condition Nos. 1, 4, 6, 9, and 10 do not apply.</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> | | | | | |
| Name | | Signature | | Company | Date |
| Charles Haden | |  | | Potesta & Associates | 10/18/2023 |

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| A/E | 124300134 | Date/Time | 10/2/2023 9:47 AM | Report # | 73 |
| Required Photos | | | | | |
|  <p>Date & Time: Mon 04/10/2023 at 09:59:27 EDT Position: +088.060928 W -060.723722 N (+18.3N) Altitude: 339.0 (+18 ft) Datum: WGS84 Azimuth Bearing: 003.0 (+0.0002 miles True) Elevation Angle: -15.7 Horizon Angle: -01.0 Zoom: 1.0 Pre-construction soil test pit and profile MVP-W-M20</p> | |  <p>Date & Time: Mon 04/10/2023 at 10:01:10 EDT Position: +088.060928 W -060.723722 N (+18.3N) Altitude: 339.0 (+18 ft) Datum: WGS84 Azimuth Bearing: 003.0 (+0.0002 miles True) Elevation Angle: -15.7 Horizon Angle: -01.0 Zoom: 1.0 At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment MVP-W-M20</p> | |  <p>Date & Time: Wed 04/19/2023 at 16:55:04 EDT Position: +088.060928 W -060.723722 N (+18.3N) Altitude: 339.0 (+18 ft) Datum: WGS84 Azimuth Bearing: 003.0 (+0.0002 miles True) Elevation Angle: -15.7 Horizon Angle: -01.0 Zoom: 1.0 At edge of LOD, view of unimpacted resource area conditions during post-construction assessment MVP-W-M20</p> | |
| GPS Location | See Photo | GPS Location | See Photo | | |
| Description | View of permitted resource impact area during pre-construction assessment. | Description | At edge of LOD, view of unimpacted resource area conditions during pre-construction assessment. | | |
|  <p>Date & Time: Wed 04/19/2023 at 16:54:18 EDT Position: +088.060928 W -060.723722 N (+18.3N) Altitude: 339.0 (+18 ft) Datum: WGS84 Azimuth Bearing: 003.0 (+0.0002 miles True) Elevation Angle: -15.7 Horizon Angle: -01.0 Zoom: 1.0 View of permitted resource impact area during post-construction assessment MVP-W-M20</p> | |  <p>Date & Time: Wed 04/19/2023 at 16:55:04 EDT Position: +088.060928 W -060.723722 N (+18.3N) Altitude: 339.0 (+18 ft) Datum: WGS84 Azimuth Bearing: 003.0 (+0.0002 miles True) Elevation Angle: -15.7 Horizon Angle: -01.0 Zoom: 1.0 At edge of LOD, view of unimpacted resource area conditions during post-construction assessment MVP-W-M20</p> | | | |
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| GPS Location | See Photo | GPS Location | See photo | | |
| Description | Photo 1: Wetland test pit. | Description | Photo 2: Wetland topsoil removal. | | |

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| A/E | 124300134 | Date/Time | 10/2/2023 9:47 AM | Report # | 73 |
| Optional Photos | | | | | |
| <p>Date & Time: Wed, Oct 04, 2023 at 14:54:08 EDT Position: +038.061179 / -080.723086 (±13.61) Altitude: 3353ft (±11.3ft) Datum: WGS-84 Azimuth/Bearing: 235° S75W 4533mils True (±35°) Elevation Angle: -05.0° Horizon Angle: +00.9° Zoom: 1.0x W-M20 topsoil contained in bags and MVP-WM23</p>  | | <p>Date & Time: Wed, Oct 04, 2023 at 13:56:18 EDT Position: +038.060670 / -080.723086 (±15.5ft) Altitude: 3352ft (±11.3ft) Datum: WGS-84 Azimuth/Bearing: 123° S54E 2240mils True (±20°) Elevation Angle: -05.0° Horizon Angle: +00.3° Zoom: 1.0x W-M20 topsoil removed; P1 fencing in place MVP-WM23</p>  | | | |
| GPS Location | See Photo | | GPS Location | See Photo | |
| Description | Photo 3: Wetland topsoil segregated in upland area. | | Description | Photo 4: Wetland topsoil removed; P1 fencing in place. | |
| <p>Date & Time: Mon, Oct 09, 2023 at 16:21:30 EDT Position: +038.060649 / -080.723059 (±15.7ft) Altitude: 3374ft (±11.3ft) Datum: WGS-84 Azimuth/Bearing: 315° N55W 5600mils True (±28°) Elevation Angle: -21.2° Horizon Angle: +02.3° Zoom: 1.0x W-M20 MVP-WM23</p>  | | <p>Date & Time: Sat, Oct 14, 2023 at 08:34:43 EDT Position: +038.060670 / -080.723075 (±26.1ft) Altitude: 3357ft (±11.3ft) Datum: WGS-84 Azimuth/Bearing: 231° N71W 5138mils True (±69°) Elevation Angle: -17.6° Horizon Angle: +00.0° Zoom: 1.0x W-M20 start at MVP-WM23</p>  | | | |
| GPS Location | See Photo | | GPS Location | See Photo | |
| Description | Photo 5: Wetland resource undisturbed 10/9/2023. | | Description | Photo 6: Wetland resource undisturbed 10/14/2023. | |
| <p>Date & Time: Wed, Oct 18, 2023 at 11:58:16 EDT Position: +038.060796 / -080.723072 (±250.2ft) Altitude: 3361ft (±11.3ft) Datum: WGS-84 Azimuth/Bearing: 252° S31W 4516mils True (±55°) Elevation Angle: -00.3° Horizon Angle: +00.3° Zoom: 1.0x Topsoil replaced in W-M20 MVP-WM23</p>  | | <p>Date & Time: Wed, Oct 18, 2023 at 12:12:12 EDT Position: +038.060796 / -080.723067 (±50.2ft) Altitude: 3371ft (±11.3ft) Datum: WGS-84 Azimuth/Bearing: 169° S89W 4782mils True (±66°) Elevation Angle: -00.2° Horizon Angle: +00.2° Zoom: 1.0x Seeding in W-M20 MVP-WM23</p>  | | | |
| GPS Location | See Photo | | GPS Location | See Photo | |
| Description | Photo 7: Wetland topsoil restoration. | | Description | Photo 8: Seed applied to wetland resource. | |