



# Stream 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>	411		
<b>Environmental Auditor</b>	O'Brien Jonathon	<b>Date/Time</b>	11/22/2023 1:31 PM		
<b>Stream ID</b>	S-D31	<b>Crossing Start Date</b>	11/24/2023	<b>Crossing Completion Date</b>	12/1/2023
<b>Milepost</b>	182.95	<b>Pre-Con Assessment Date</b>	11/22/2023	<b>Post-Con Assessment Date</b>	12/1/2023
<b>Station</b>	9659+76	<b>Bankfull Width (ft.)</b>	65.0	<b>Riffle:Pool Complexes Present?</b>	No
<b>State</b>	WV	<b>Stream Classification</b>	Perennial		
<b>County</b>	Monroe	<b>303(d) Impairment Listing</b>	Biological, Fecal		

### Resource Post-Crossing Conditions







1	Were all applicable resource specific crossing conditions satisfied?	N/A
	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)?	Yes
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.	Yes

### 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")	Cobble (2-10")
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	2
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.)	2	3

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<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)			2	2	
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)			3	3	
<b>Additional Notes</b>						
<p>Pre-Construction Notes  Pre-Construction Meeting - 11/22/2023  19. Active ford located at crossing (vehicles observed using ford prior to construction).  11/22/2023 - Began excavating topsoil in the northern (RDB) riparian buffer.  11/24/2023 - Prepped to build dam and pump-around road plates. Placed timber mats US in aquatic resource to complete US dam installation. Installed road plates in aquatic resource. Installed concrete barriers for support. Started pump. Added sandbags and plastic. Constructed DS dam using road plates, sandbags and plastic. Used pump to drain water from trench area in aquatic resource. Removed remaining topsoil from buffer on both banks. Removed first 12 inches of substrate (Photo 1), stored separately in upland area (Photo 2) and covered with plastic.  11/25/2023 - Pump-around system in use. Blasting crew prepped to bore holes for dynamite in aquatic resource (Photo 3). Blasted. Began boring holes on southern side (LDB) of aquatic resource. Excavated RDB and aquatic resource area. Prepped boreholes in upland on LDB. Blasted. Excavated in upland area.  11/26/2023 - Pump-around system in use. Making pad dirt in prep for backfill. Used John Henry excavator to break up rock through aquatic resource area. Reinforcing DS dam with more sandbags. Continued hammering and excavating trench. Excavated through aquatic resource.  11/27/2023 - Pump-around system in use. Pumping water from trench. Excavated and hammered in trench at bell hole in riparian buffer. Added additional sandbags and plastic to DS dam. Pumped water to tanker trucks. Finished excavating trench in aquatic resource area (Photo 4). Placed sandbag "pillows" in trench for padding.  11/28/2023 - Pump-around system in use. Pumped water from trench into tanker truck (occurred throughout day). Moved pipe down to trench (Photo 5) and lowered pipe into trench in aquatic resource area. Welding. Survey onsite to shoot pipe location.  11/29/2023 - Pump-around system in use. Pumped water from trench into tanker truck (occurred throughout day). Added river weights onto pipe. Sandblasted. Survey onsite to shoot trench breaker locations. Constructed northern trench breaker (Photo 6). Coated. Added test leads. Constructed southern trench breaker. Began adding padding dirt to trench in aquatic resource area. Began adding subsoil.  11/30/2023 - Backfilled aquatic resource area with subsoil (Photo 7). Survey onsite shooting elevations. Equipment moved to the southern side of ROW. Topsoil added to aquatic resource area. Added substrate. Worked with survey to get elevation of contours correct. Installed super silt fence above LDB buffer. Removed DS dam. Removed US dam. Survey shooting final elevations.  12/1/2023 - Removed equipment. Added seed and curlex to buffer on LDB. Added seed and curlex to RDB (Photo 8).  Post Construction Notes  14. On November 27th a dewatering structure was overwhelmed and released a minor amount of sediment into the stream. The dewatering operation was immediately stopped and dewatering to tanker trucks was initiated.  15. Change in substrate size in trenched area. Remaining substrate in LOD is consistent with pre-construction.  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.</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>
O'Brien Jonathon				Potesta and Associates		12/3/2023



AFE 124300135		Date/Time 11/22/2023 1:31 PM		Report # 411	
Required Photos					
<p>Date &amp; Time Wed, Nov 22, 2023 at 1:28:55 EST  Position: +037.5542581, -080.716931 (-20.0H)  Altitude: 15571 (+42.0H)  Datum: WGS-84  Azimuth Bearing: 284 N76W 5009mils True (+12)  Elevation Angle: +0.4  Horizon Angle: +0.3  Zoom: 1.0X  SD31 Downstream view of permitted impact area during pre-construction assessment  MVP</p> 		<p>Date &amp; Time Wed, Nov 22, 2023 at 1:28:55 EST  Position: +037.5542581, -080.716931 (-20.0H)  Altitude: 15571 (+42.0H)  Datum: WGS-84  Azimuth Bearing: 284 N76W 5009mils True (+12)  Elevation Angle: +0.4  Horizon Angle: +0.3  Zoom: 1.0X  SD31 Downstream view of unimpacted area during pre-construction assessment  MVP</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>Date &amp; Time Wed, Nov 22, 2023 at 1:51:56 EST  Position: +037.5542591, -080.716927 (-20.0H)  Altitude: 15670 (+42.0H)  Datum: WGS-84  Azimuth Bearing: 293 N67W 5209mils True (+16)  Elevation Angle: +08.4  Horizon Angle: +00.6  Zoom: 1.0X  SD31 Downstream view of permitted impact area during post construction assessment  MVP</p> 		<p>Date &amp; Time Wed, Nov 22, 2023 at 1:51:26 EST  Position: +037.5542591, -080.716931 (-20.0H)  Altitude: 15788 (+42.0H)  Datum: WGS-84  Azimuth Bearing: 293 N67W 5209mils True (+15)  Elevation Angle: +08.2  Horizon Angle: +01.3  Zoom: 1.0X  SD31 Downstream view of unimpacted area during post construction assessment  MVP</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.		<b>Description</b> Downstream view of unimpacted area during post-construction assessment.			
<p>Date &amp; Time Fri, Nov 24, 2023 at 15:47:18 EST  Position: +037.5541177, -080.716077 (-20.0H)  Altitude: 15790 (+42.0H)  Datum: WGS-84  Azimuth Bearing: 285 N65W 5200mils True (+12)  Elevation Angle: +08.3  Horizon Angle: +02.4  Zoom: 1.0X  SD31 Removing stream topsoil  MVP</p> 		<p>Date &amp; Time Fri, Nov 24, 2023 at 15:48:29 EST  Position: +037.5541177, -080.716077 (-20.0H)  Altitude: 15790 (+42.0H)  Datum: WGS-84  Azimuth Bearing: 285 N65W 5200mils True (+12)  Elevation Angle: +08.3  Horizon Angle: +02.4  Zoom: 1.0X  SD31 Segregated substrate and topsoil from banks.  MVP</p> 			
<b>GPS Location</b> See Photo		<b>GPS Location</b> See Photo			
<b>Description</b> Photo 1: Excavating first 12 inches of substrate.		<b>Description</b> Photo 2: Segregated substrate and topsoil from banks.			



<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: Boring holes for blasting in aquatic resource area.	<b>Description</b> Photo 4: Trench through aquatic resource.
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 5: Moving pipe to trench in aquatic resource area.	<b>Description</b> Photo 6: Building trench breaker. River weights in place.
<b>GPS Location</b> See Photo	<b>GPS Location</b> See Photo
<b>Description</b> Photo 7: Adding subsoil to aquatic resource area.	<b>Description</b> Photo 8: Seeding.