

**Attachment P-1  
Resource-Specific Avoidance and Minimization Measures  
Wyoming County**

Resource Type (Stream or Wetland)	Resource Name	Resource ID	MP	Chapter 93 Classification, Wetland Classification	Stream Type (Perennial, Intermittent, Ephemeral)	Stream Trout Status (Class A Wild Trout, Wild Trout, Trout Stocked)	Wetland (Cowardin Classification)	Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #25 and #29)	Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #13)*
Wetland	N/A	W-T57-18002-2	M-0088 2.61	None	N/A	N/A	PEM	W-T57-18002-2 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within this wetland was reduced by 5' to minimize impacts.	Major re-routes were evaluated in this area, with various options considered and routed within an approximately 3-mile diameter area. The final route avoids a number of large streams and wetlands and minimizes side slope construction. In particular, the route avoids crossing the main streams feeding and draining Lake Catalpa.  At this impact location, the pipeline was routed to avoid a large wetland 180 feet to the east and to avoid most of this wetland. Additionally, the wetland is crossed at its edge to minimize habitat fragmentation.
Stream	UNT to Whitelock Creek	WW-T54-18002B	M-0088 3.16	CWF, MF	Perennial	Wild Trout Waters	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T54-18005 crossing)	The pipeline was routed in this location to provide a perpendicular crossing of WW-T54-18002A and WW-T54-18002, to avoid impact to stream confluences, and to minimize impact to wetland W-T54-18005.  Within the larger area, the pipeline was re-routed north 1,200' to reduce impact to wetland W-T54-18005, as the wetland significantly widens as it moves downslope.
Stream	UNT to Whitelock Creek	WW-T54-18002A	M-0088 3.17	CWF, MF	Intermittent	Wild Trout Waters	R4	LOD reduction not possible at this crossing (per justification provided for wetland W-T54-18005 crossing)	The pipeline was routed in this location to provide a perpendicular crossing of WW-T54-18002A and WW-T54-18002, to avoid impact to stream confluences, and to minimize impact to wetland W-T54-18005.  Within the larger area, the pipeline was re-routed north 1,200' to reduce impact to wetland W-T54-18005, as the wetland significantly widens as it moves downslope.
Stream	Whitelock Creek	WW-T54-18002	M-0088 3.18	CWF, MF	Perennial	Wild Trout Waters	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T54-18005 crossing)	The pipeline was routed in this location to provide a perpendicular crossing of WW-T54-18002A and WW-T54-18002, to avoid impact to stream confluences, and to minimize impact to wetland W-T54-18005.  Within the larger area, the pipeline was re-routed north 1,200' to reduce impact to wetland W-T54-18005, as the wetland significantly widens as it moves downslope.

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Wetland	N/A	W-T54-18005	M-0088 3.19	EV	N/A	N/A	PFO	LOD reduction to 75' was not possible due to the saturated nature of the wetland complex, unconsolidated soils in area, and adjacent stream. The additional workspace will provide storage for spoil within the wetland and will result in less impact than transporting material to a stockpile area outside the wetland.	The pipeline was routed in this location to provide a perpendicular crossing of WW-T54-18002A and WW-T54-18002, and to avoid impact to stream confluences.  Within the larger area, the pipeline was re-routed north 1,200' to reduce impact to wetland W-T54-18005, as the wetland significantly widens as it moves downslope.
Wetland	N/A	W-T54-18006-3 / W-T54-18006-4 / W-T54-18006-1	M-0088 3.74	None	N/A	N/A	PEM	W-T54-18006-3 and W-T54-18006-1 do not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within these portions of the wetland complex was reduced by 5' to minimize impacts. The LOD at W-T54-18006-4 was reduced to eliminate impacts to this portion of the wetland complex.	The pipeline was routed in this location to provide a perpendicular crossing of stream WW-T54-18003, avoid impact to stream WW-T54-18003A, and avoid the confluence of these streams. The confluence is 35' west of the LOD. The pipeline was not routed to the east to avoid impacting a pond and minimize impacts to wetland W-T54-18007.
Stream	UNT to Whitelock Creek	WW-T54-18003	M-0088 3.80	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 80' to minimize impacts to WW-T54-18003.	The pipeline was routed in this location to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T54-18007C / W-T54-18007C-1	M-0088 3.84	None	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to W-T54-18007.	The pipeline was routed in this location to provide a perpendicular crossing of stream WW-T54-18003, avoid impact to stream WW-T54-18003A and avoid the confluence of these streams. The confluence is 35 feet west of the LOD. The pipeline was not routed to the east to avoid impact to a pond and to minimize wetland impact and wetland fragmentation.
Stream	UNT to Whitelock Creek	WW-T69-18001	30.25	CWF, MF	Ephemeral	Wild Trout Waters	R6	LOD has been reduced to 75' to minimize impacts to WW-T69-18001.	The pipeline was routed at this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.
Stream	UNT to Whitelock Creek	WW-T69-18002	30.28	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 75' to minimize impacts to WW-T69-18002.	The pipeline was routed at this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.

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Stream	UNT to Whitelock Creek	WW-T69-18003	30.28	CWF, MF	Ephemeral	Wild Trout Waters	R6	LOD has been reduced to 75' to minimize impacts to WW-T69-18003.	The pipeline was routed at this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.
Wetland	N/A	W-T69-18002C	30.29	EV	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to W-T69-18002C.	The pipeline was routed at this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.
Stream	UNT to Whitelock Creek	WW-T69-18004	30.30	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 75' to minimize impacts to WW-T69-18004.	The pipeline was routed at this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, minimize impact to wetland W-T69-18002C, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.
Wetland	N/A	W-T69-18002A	30.30	EV	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T69-18002A.	The pipeline was routed at this location to provide a perpendicular crossing of two public roads to the south, maximize collocation with a foreign pipeline starting north of this location, minimize impact to wetland W-T69-18002C, and reduce forest fragmentation by crossing near existing residential lots rather than bisecting an interior forest.
Wetland	N/A	W-T08-18001	M-0071 0.52	None	N/A	N/A	PEM	The LOD for W-T08-18001 has been reduced to eliminate impacts.	This feature is no longer impacted based on LOD reductions.
Wetland	N/A	W-T05-18002A/ W-T05-18002B-1/ W-T05-18002C	M-0071 0.67	EV	N/A	N/A	PEM, PSS, PFO	W-T05-18002 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within this wetland was reduced by 5' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to provide a perpendicular crossing of WW-T05-18001.
Stream	Mill Creek	WW-T05-18001	M-0071 0.68	CWF, MF	Perennial	Wild Trout Waters	R3	LOD for WW-T05-18001 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to provide a perpendicular crossing of the wetland.
Wetland	N/A	W-T95-19008 / W-T95-19008-2	M-0071 1.89	None	N/A	N/A	PEM	W-T95-19008 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within this wetland was reduced by 5' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to avoid impacting a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.

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Stream	UNT to Martin Creek	WW-T13-19001	M-0071 1.92	CWF, MF	Ephemeral	None	R6	LOD for WW-T13-19001 has been reduced to 80' to minimize impacts.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to avoid impacting a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.
Wetland	N/A	W-T13-19001 A/ W-T13-19001A-1 W-T13-19001C / W-T13-19001C-2	M-0071 2.04	None	N/A	N/A	PEM, PFO	LOD has been reduced to 75' to minimize impacts to W-T13-19001.	The pipeline was routed in this location to minimize wetland habitat fragmentation by generally crossing wetland W-T13-19001 on the margin of the system. Additionally, the crossing was field routed to maintain collocation with a foreign pipeline, and to avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.
Stream	UNT to Martin Creek	WW-T92-19002	M-0071 2.06	CWF, MF	Perennial	None	R3	WW-T92-19002 does not extend across the full width of the LOD. LOD reduction is not possible at this location due to the adjacent PI and wetland crossing.	The pipeline was routed in this location to provide a perpendicular crossing of the stream, maintain collocation with a foreign pipeline, and avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.
Stream	UNT to Martin Creek	WW-T13-19002	M-0071 2.10	CWF, MF	Intermittent	None	R4	LOD has been reduced to 75' to minimize impacts to WW-T13-19002.	The pipeline was routed in this location to provide a perpendicular crossing of the stream, maintain collocation with a foreign pipeline, and avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.
Stream	UNT to Martin Creek	WW-T13-19003	M-0071 2.16	CWF, MF	Intermittent	None	R4	LOD has been reduced to 80' to minimize impacts to WW-T13-19003.	The pipeline was routed in this location to provide a perpendicular crossing of the stream, maintain collocation with a foreign pipeline, and avoid impacts to a large wetland located east of the pipeline. Collocation in this location also avoids additional forest fragmentation.
Wetland	N/A	W-T13-19001A-1	M-0071 2.3	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T13-19001A.	The pipeline was routed in this location to maintain collocation with a foreign pipeline and to avoid large ponds located immediately north and south of the LOD.
Stream	Susquehanna River	WW-T21-19001	34.97	WWF, MF	Perennial	WWCW Fisheries Streams	R3	WW-T21-19001 is being crossed via HDD. No impacts will result from crossing.	The pipeline was routed in this location to provide a perpendicular crossing of the Susquehanna River in an area with adjacent uplands suitable for the workspace necessary for HDD operations.
Stream	UNT to Susquehanna River	WW-T93-19001	35.05	CWF, MF	Intermittent	None	R4	WW-T93-19001 is being crossed via HDD. No impacts will result from crossing.	N/A - stream will be crossed by Susquehanna River HDD.

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Wetland	N/A	W-T21-19001 / W-T21-19001-1	35.08	None	N/A	N/A	PEM	W-T21-19001 and W-T21-19001-1 are being crossed via HDD. No impacts will result from crossing.	N/A - wetland will be crossed by Susquehanna River HDD.
Stream	UNT to Susquehanna River	WW-T95-19004A	35.10	CWF, MF	Intermittent	None	R4	WW-T95-19004A is being crossed via HDD. No impacts will result from crossing.	N/A - stream will be crossed by Susquehanna River HDD.
Stream	UNT to Susquehanna River	WW-T21-19002	35.89	CWF, MF	Perennial	None	R3	LOD for WW-T21-19002 has been reduced to 80' to minimize impacts.	The pipeline was routed in this area to provide a perpendicular crossing of the stream and reduce impacts to W-T19-19007.
Wetland	N/A	W-T19-19007	35.91	None	N/A	N/A	PSS	LOD has been reduced to 75' to minimize impacts to W-T19-19007.	The pipeline was routed at this location to cross the wetland at its most narrow point and to provide a perpendicular crossing of WW-T21-19002.
Wetland	N/A	W-T19-19006	36.41	None	N/A	N/A	PEM	W-T19-19006 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed at this location to reduce impacts by crossing the margin of the wetland.
Stream	UNT to Susquehanna River	WW-T19-19002	36.83	CWF, MF	Ephemeral	None	R6	LOD for WW-T19-19002 has been reduced to 80' to minimize impacts.	The pipeline was routed at this location to provide a perpendicular crossing of the stream and to minimize impact to the adjacent wetland W-T19-19004.
Wetland	N/A	W-T19-19004	36.86	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T19-19004.	The pipeline was routed at this location to reduce impacts by crossing the margin of the wetland and provide a perpendicular crossing of adjacent stream WW-T19-19002.
Wetland	N/A	W-T19-19003	36.93	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T19-19003.	The pipeline was routed at this location to provide a perpendicular crossing of adjacent stream WW-T19-19002. Close proximity to WW-T19-002 and W-T19-19004 precluded the avoidance of this wetland, or further minimization of impacts.
Stream	UNT to Susquehanna River	WW-T19-19001	37.08	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-T19-19001.	The pipeline was routed at this location to avoid impacting a spring located directly north of the resource crossing, avoid impacting the confluence of streams WW-T19-19001 and WW-T95-19002, and to provide a perpendicular crossing of the stream.

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Wetland	N/A	W-T19-19002A-1/ W-T19-19002B	37.08	None	N/A	N/A	PEM, PSS	LOD has been reduced to 75' to minimize impacts to W-T19-19002.	The pipeline was routed at this location to avoid impacting a spring located directly north of the resource crossing, avoid impacting the confluence of streams WW-T19-19001 and WW-T95-19002, and to minimize impacts to the scrub-shrub portion of the wetland.
Stream	UNT to Susquehanna River	WW-T95-19002	37.08	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-T19-19002.	The pipeline was routed at this location to avoid impacting a spring located directly north of the resource crossing, avoid impacting the confluence of streams WW-T19-19001 and WW-T95-19002, and to provide a perpendicular crossing of the stream.
Stream	UNT to Susquehanna River	WW-T15-4001	37.28	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-T15-4001.	The pipeline was routed at this location to provide a perpendicular crossing of the nearby public road, provide a perpendicular crossing of the stream, and to minimize tree clearing by routing along the edge of the adjacent agricultural field.
Wetland	N/A	W-T19-19001	37.27	None	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to WW-T19-19001.	The pipeline was routed at this location to provide a perpendicular crossing of the nearby public road, provide a perpendicular crossing of the wetland, and to minimize tree clearing by routing along the edge of the adjacent agricultural field.
Stream	UNT to Susquehanna River	WW-T15-4002	37.29	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 75' to minimize impacts to WW-T15-4002.	The pipeline was routed at this location to provide a perpendicular crossing of the nearby public road, provide a perpendicular crossing of the stream, and to minimize tree clearing by routing along the edge of the adjacent agricultural field.
Wetland	N/A	W-T15-4001A / W-T15-4001A-1/ W-T15-4001B / W-T15-4001B-1 / W-T15-4001B-2 / W-T15-4001B-3	37.61	None	N/A	N/A	PEM	LOD reduction to 75' was not possible due to the saturated nature of the wetland complex, unconsolidated soils in area, and adjacent stream. The additional workspace will provide storage for spoil within the wetland and will result in less impact than transporting material to a stockpile area outside the wetland.	Pipeline routing was constrained in this location by the large, linear nature of wetland W-T15-4001, with the wetland extending west to a pond and east for at least 600 feet. The pipeline was routed at this location to provide a perpendicular crossing of adjacent stream WW-T24-19001.
Stream	UNT to Susquehanna River	WW-T24-19001B	37.65	CWF, MF	Perennial	None	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T15-4001 crossing)	The pipeline was routed at this location to avoid direct impacts to this stream.

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Stream	UNT to Susquehanna River	WW-T24-19001	37.68	CWF, MF	Perennial	None	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T15-4001 crossing)	The pipeline was routed at this location to provide a perpendicular crossing of this stream.
Stream	UNT to Susquehanna River	WW-T24-19001A	37.68	CWF, MF	Perennial	None	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T15-4001 crossing)	The pipeline was routed at this location to avoid direct impacts to this stream.
Wetland	N/A	W-T95-19006A	37.85	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T95-19006A.	The pipeline was routed at this location to minimize impacts by crossing the wetland at its most narrow point.
Stream	UNT to Susquehanna River	WW-T19-19003	38.07	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 80' to minimize impacts to WW-T19-19003.	The pipeline was routed at this location to provide a perpendicular crossing of this stream.
Stream	UNT to Mill Run	WW-T54-19001	38.54	CWF, MF	Perennial	Wild Trout Waters	R3	LOD has been reduced to 80' to minimize impacts to WW-T54-19001.	The pipeline was routed at this location to provide a perpendicular crossing of this stream and to avoid impacts to stream WW-T54-19001A.
Wetland	N/A	W-T12-19001	39.35	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T12-19001.	Pipeline routing was constrained at this location due to adjacent homes and a pond abutting the workspace. Additionally, wetland W-T12-19001 is large and extends across the entire field. Impacts were minimized by routing the pipeline perpendicular across the wetland.
Wetland	N/A	W-T12-19002	39.99	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to W-T12-19002.	The wetland extends across the entire routing corridor and therefore could not be avoided; impacts were minimized by routing a perpendicular crossing.
Stream	UNT to Beaver Creek	WW-T12-19002	40.00	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T12-19002.	The pipeline was routed at this location to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T12-19003C-1/ W-T12-19003C-2/ W-T12-19003A	40.84	None	N/A	N/A	PEM, PFO	LOD has been reduced to 75' to minimize impacts to W-T12-19003.	The pipeline was routed at this location around the edge of the wetland complex to minimize impacts. Further avoidance was constrained by an adjacent house, a public road, and a pond.
Stream	UNT to Trout Brook	WW-T93-20002	40.87	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T93-20002.	The pipeline was routed to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T19-20004 / W-T19-20004-1 / W-T19-20004-2	40.96	None	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to W-T19-19004.	The pipeline was routed in this location to provide a perpendicular crossing of both the wetland and adjacent public road.
Stream	Trout Brook	WW-T19-20005	M-0054 0.10	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T19-20005.	The pipeline was routed in this location to provide a perpendicular crossing of this stream.



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Wetland	N/A	W-T14-20004	43.61	None	N/A	N/A	PEM	W-T14-2004 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed in this location to avoid impacting the adjacent stream WW-T14-20004.
Stream	UNT South Branch Tunkhannock Creek	WW-T14-20004	43.63	TSF, MF	Ephemeral	Approved Trout Waters; Trout Stocked Stream	R6	The LOD for W-T14-20004 was necked down to eliminate impacts.	This feature is no longer impacted based on LOD reductions.
Stream	South Branch Tunkhannock Creek	WW-T14-20003	43.72	TSF, MF	Perennial	Approved Trout Waters; Trout Stocked Stream	R3	LOD reduction not feasible due to complex stream crossing and two PI's located north and south of the feature.	The pipeline was routed to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T14-20003	43.89	None	N/A	N/A	PEM	W-T14-2003 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, a portion of the LOD within this wetland has been reduced by 15 feet to minimize impacts.	The pipeline was routed to avoid habitat fragmentation and minimize impacts by crossing the margin of the wetland.
Wetland	N/A	W-T14-20002	44.43	None	N/A	N/A	PEM	LOD reduction to 75' was not possible due to the saturated nature of the wetland complex, unconsolidated soils in area, and adjacent stream. The additional workspace will provide storage for spoil within the wetland and will result in less impact than transporting material to a stockpile area outside the wetland.	The pipeline was routed in this location to avoid impacting a much larger wetland to the southeast. Minimization of impacts to wetland W-T14-20002 was constrained by adjacent homes and ponds.  On a wider scale, the pipeline was routed in this area to minimize tree clearing/forest fragmentation and minimize wetland impact. During routing an alternate route was considered 0.5 miles north of this crossing, but was found to require greater forest and wetland impacts than the proposed route.
Stream	UNT to South Branch Tunkhannock Creek	WW-T14-20002/ WW-T14-20002A	44.43	CWF, MF	Perennial	Approved Trout Waters; Trout Stocked Stream	R3	LOD reduction not possible at this crossing (per justification provided for wetland W-T14-20002 crossing)	Minimization of impacts to this stream system was constrained by the adjacent public road and barn.  On a wider scale, the pipeline was routed in this area to minimize tree clearing/forest fragmentation and minimize wetland impact. During routing an alternate route was considered 0.5 miles north of this crossing, which was found to require greater forest and wetland impacts than the proposed route.



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Wetland	N/A	W-T19-20003A/ W-T19-20003B	45.23	None	N/A	N/A	PEM, PSS	W-T19-2003 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. However, the portion of the LOD within this wetland has been reduced by 5 feet to minimize impacts.	The pipeline was routed at this location to maximize use of an agricultural field and avoid habitat fragmentation by crossing the margin of the wetland.
Stream	UNT to South Branch Tunkhannock Creek	WW-T19-20004	45.33	CWF, MF	Perennial	Approved Trout Waters	R3	LOD has been reduced to 80' to minimize impacts to WW-T19-20004.	The pipeline was routed in this location to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T10-20001C-1/ W-T10-20001B/ W-T10-20001A	45.76	None	N/A	N/A	PFO	LOD has been reduced to 75' to minimize impacts to W-T10-20001.	Pipeline routing was constrained at this location due to an adjacent public road to the north and residence to the south. Additionally, the wetland extends across the entire routing corridor. Impacts were minimized by routing the pipeline perpendicular across the wetland.
Stream	UNT to South Branch Tunkhannock Creek	WW-T10-20001	45.78	CWF, MF	Intermittent	None	R4	LOD has been reduced to 75' to minimize impacts to WW-T10-20001.	Pipeline routing was constrained at this location due to an adjacent public road to the north and residence to the south. Additionally, the wetland extends across the entire routing corridor. Impacts were minimized by routing the pipeline perpendicular across the wetland.
Stream	UNT to South Branch Tunkhannock Creek	WW-T10-20002	45.93	CWF, MF	Perennial	None	R3	LOD has been reduced to 80' to minimize impacts to WW-T10-20002.	The pipeline in this area was shifted south to avoid a large wetland complex (W-T10-20002) identified in the northern end of the routing corridor. The pipeline was also routed in this location to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T54-20002	46.11	None	N/A	N/A	PEM	LOD reduction to 75' was not possible due to steep slopes and the multiple PI's occurring along the route immediately after the crossing.	The pipeline in this area was shifted south to avoid a much larger wetland complex (W-T10-20002) identified in the northern end of the routing corridor. The pipeline was also routed in this location to provide a perpendicular crossing of this wetland.
Stream	UNT to South Branch Tunkhannock Creek	WW-T54-20002	46.18	CWF, MF	Intermittent	None	R4	LOD reduction not possible at this crossing (per justification provided for wetland W-T54-20002 crossing)	The pipeline was routed to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T28-20001	46.34	None	N/A	N/A	PEM	The LOD for W-T28-20001 was necked down to eliminate impacts.	This feature is no longer impacted based on LOD reductions.
Stream	UNT to South Branch Tunkhannock Creek	WW-T10-20003	MOC-0058 0.23	CWF, MF	Perennial	None	R3	LOD has been reduced to 80' to minimize impacts to WW-T10-20003.	The pipeline was routed to provide a perpendicular crossing of this stream.

Resource Type (Stream or Wetland)	Resource Name	Resource ID	MP	Chapter 93 Classification, Wetland Classification	Stream Type (Perennial, Intermittent, Ephemeral)	Stream Trout Status (Class A Wild Trout, Wild Trout, Trout Stocked)	Wetland (Cowardin Classification)	Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #25 and #29)	Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #13)*
Stream	UNT to South Branch Tunkhannock Creek	WW-T19-20002	46.92	CWF, MF	Ephemeral	None	R6	LOD has been reduced to 80' to minimize impacts to WW-T19-20002.	The pipeline was routed in this location to avoid impacting W-T19-20002, located 30 feet east of the proposed LOD. The route also provides a perpendicular crossing of WW-T19-20002.
Stream	UNT to South Branch Tunkhannock Creek	WW-T19-20003	47.22	CWF, MF	Perennial	None	R3	LOD has been reduced to 80' to minimize impacts to WW-T19-20003.	The pipeline was routed to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T65-20001A/ W-T65-20001C	48.22	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to WW-T65-20001.	The pipeline was routed at this location to minimize impacts by crossing the wetland at its most narrow point. Additional minimization was constrained by adjacent residences.
Wetland	N/A	W-T19-20001	48.72	EV	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T19-20001.	The pipeline was routed at this location to minimize impact to stream WW-T19-20001. The original route crossed an area with a braided stream channel. The pipeline was moved to cross a single channel at a perpendicular angle.
Stream	UNT to Tunkhannock Creek	WW-T19-20001	48.74	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T19-20001.	The pipeline was routed at this location to minimize impact to this stream. The original route crossed an area with a braided stream channel. The pipeline was moved to cross a single channel at a perpendicular angle.
Stream	Tunkhannock Creek	WW-T54-21001	49.29	TSF, MF	Perennial	Approved Trout Waters; WWCW Fisheries Stream	R3	LOD reduction to 75' was not possible due to the feature being a navigable water requiring Aids To Navigation (ATON).	The pipeline was routed at this location to avoid crossing this stream on a steep slope and to provide a perpendicular crossing.
Wetland	N/A	W-T17-20001	M-0080 0.25	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T17-20001.	The pipeline was routed at this location to minimize wetland impact by crossing at a perpendicular angle. Adjacent site constraints including residential homes and the public road crossing precluded full wetland avoidance.
Wetland	N/A	W-T57-21006	M-0080 0.66	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T57-21006.	The pipeline was routed at this location to cross the wetland at its most narrow point.
Wetland	N/A	W-T57-21005	M-0080 0.77	None	N/A	N/A	PEM	The LOD for W-T57-20005 was necked down to eliminate impacts.	This feature is no longer impacted based on LOD reductions.
Stream	UNT to Tunkhannock Creek	WW-T57-21003	M-0080 1.09	CWF, MF	Perennial	None	R3	LOD has been reduced to 75' to minimize impacts to WW-T57-21003.	The pipeline was routed to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T57-21004	M-0080 1.10	None	N/A	N/A	PSS	LOD has been reduced to 75' to minimize impacts to W-T57-21004.	The pipeline was routed to provide a perpendicular crossing of this narrow linear wetland.
Wetland	N/A	W-T57-21003B/ W-T57-21003C	M-0080 1.13	None	N/A	N/A	PSS, PFO	LOD has been reduced to 75' to minimize impacts to W-T57-21003.	The pipeline was routed in this location to avoid impacting the forested portion of the wetland.

Resource Type (Stream or Wetland)	Resource Name	Resource ID	MP	Chapter 93 Classification, Wetland Classification	Stream Type (Perennial, Intermittent, Ephemeral)	Stream Trout Status (Class A Wild Trout, Wild Trout, Trout Stocked)	Wetland (Cowardin Classification)	Limits of Disturbance (LOD) Adjustments (Supporting Information for Technical Deficiencies #25 and #29)	Field Routing Adjustments within 600-foot Wide Corridor (Supporting Information for Technical Deficiency #13)*
Stream	UNT to Tunkhannock Creek	WW-T57-21002	M-0080 1.27	CWF, MF	Intermittent	None	R4	LOD has been reduced to 80' to minimize impacts to WW-T57-21002.	The pipeline was routed to provide a perpendicular crossing of this stream.
Wetland	N/A	W-T57-21002	M-0080 1.32	None	N/A	N/A	PEM	W-T57-21002 does not extend across the full width of the LOD. Since the wetland width within the LOD is less than 75', the FERC Procedures do not require LOD reduction. In addition, an LOD reduction at this location would only be possible in the adjacent upland area and would not result in minimization of wetland impacts.	The pipeline was routed in this location to provide a perpendicular crossing of stream WW-T57-21002, avoid workspace being placed parallel and abutting stream WW-T57-21002, and to avoid wetland W-T57-21001, located 30 feet east of the proposed LOD.
Wetland	N/A	W-T31-21001	50.48	None	N/A	N/A	PEM	LOD has been reduced to 75' to minimize impacts to W-T31-21001.	The pipeline was routed to provide a perpendicular crossing of the narrow, linear wetland.

**Note:**

\*The FERC Alignment Sheets provided in Attachment H-1 show field delineated streams and wetlands within the 300-foot wide environmental survey corridor, and surrounding land use features on an aerial base map.