ATTACHMENT 10

ENVIRONMENTAL ASSESSMENT FORM

Appendix B: Aquatic Resource Tables

Potter County

- S2.B-1 General Characteristics of Wetlands Crossed in Potter County
- S2.B-2 General Characteristics of Waterbodies Crossed in Potter County
- S3.C-1 Impacted Area of Wetlands Crossed in Potter County
- S3.C-2 Impacted Area of Waterbodies Crossed in Potter County

Overall Project

- S3.C-3 Impacted Area of All Wetlands Crossed by the Tioga Pathway Project
- S3.C-4 Impacted Area of All Waterbodies Crossed by the Tioga Pathway Project

S.B-1. General Characteristics of Wetlands Crossed by the Tioga Pathway Project, Potter County

Approximate Milepost	Wetland I.D.	Cowardin Classification	Approximate Pipeline Centerline Crossing Length (ft)[a]	Level 2 Rapid Assessment Overall Condition Index[b]	Exceptional Value Wetland (Y/N)[c]	Proposed Crossing Method / Notes[d]	HGM Classification[e]
Replacement Pipeline (Z20 Pipeline)							
0.00	W01z	PEM	0	0.80	N	Temporary Matting	R4
0.10	W01	PSS	207	0.74	N	Conventional Wetland Crossing	R3
0.70	W02	PEM	476	0.58	N	Conventional Wetland Crossing	R3
		PSS	0		N	Conventional Wetland Crossing	R3
1.35	W03	PEM	16	0.67	N	Conventional Wetland Crossing	FLn
		PFO	114		N	Conventional Wetland Crossing	FLn
1.84	W04	PEM	290	0.78	N	Conventional Wetland Crossing	R3c
		PFO	30		N	Conventional Wetland Crossing	R3c
1.95	W05	PEM	138	0.79	N	Conventional Wetland Crossing	R3c
2.16	W06	PEM	193	0.74	N	Conventional Wetland Crossing	R2
		PSS	400		N	Conventional Wetland Crossing	R2
2.72	W07	PEM	62	0.62	N	Conventional Wetland Crossing	R2
		PFO	0		N	Conventional Wetland Crossing	R2
3.38	W08	PEM	41	0.53	N	Conventional Wetland Crossing	R2
Mainline Pipeline (YM59 Pipeline)							
2.35	W10	PFO	43	0.94	N	Conventional Wetland Crossing	FLn
Aboveground Facilities							
Ellisburg CS	W45	PEM	Avoided	0.73	N	Not Applicable	R2
Ellisburg CS	W46	PEM	Avoided	0.73	N	Not Applicable	R2
Ellisburg CS	W47	PEM	Avoided	0.75	N	Not Applicable	R2

Approximate Milepost	Wetland I.D.	Cowardin Classification	Approximate Pipeline Centerline Crossing Length (ft)[a]	Level 2 Rapid Assessment Overall Condition Index[b]	Exceptional Value Wetland (Y/N)[c]	Proposed Crossing Method / Notes[d]	HGM Classification[e]
Access Roads							
Z20 TAR-1	W02	PEM	Not Applicable	0.58	N	Temporary Matting	R3

Notes:
a Crossing width of resource at the pipeline centerline.
b Level 2 Rapid Assessment Overall Condition Index forms are provided in the Aquatic Resource Report included as Appendix A of this Environmental Assessment.
c Status of EV wetlands is determined using the criteria presented in Chapter 105.17 (1).
d Conventional Wetland Crossing Method = trenching or open cut method where the pipeline is being placed into the ground. Additional temporary matting is placed across the wetland for an equipment travel lane. Excavated fill will be replaced where trenching occurs.
e Definitions of HGM codes obtained from "Hydrogeomorphic Wetland Classification: HGM classification for wetlands of Mid-Atlantic Region, USA" by Robert P. Brooks http://files.dep.state.pa.us/Water/BWEW/WaterObstruction/PA_HGM_Key_1.0.pdf:

- R2- Riverine lower perennial
- R3- Riverine upper perennial
- R3c- Riverine headwater complex
- R4- Riverine intermittent
- FLn- Flat mineral soil

f Site Plans are provided in Attachment 6 of this Joint Permit Application.

Table S2.B-2. General Characteristics of Waterbodies Crossed by the Tioga Pathway Project, Potter County

Approximate Milepost	Waterbody I.D.[a]	Stream Name[b]	Flow Regime	Water Width (feet)	PA Chapter 93 Classification[c]	PAFBC Stream Designation	Level 2 Rapid Assessment Riverine Condition Index[d]	Anticipated Construction Timing Restriction[e]	Proposed Crossing Method[f]
Replacement Pipeline (Z20 Pipeline)									
0.05	D-03z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Dry Crossing
0.05	D-04z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Temporary Mat
0.05	D-08z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Temporary Mat
0.10	S01	Marsh Creek	Perennial	8	CWF	Drains to Stocked Trout Stream	0.52	February 15 – June 1	Dry Crossing
0.10	S02	UNT to Marsh Creek	Perennial	0.5[i]	Drains to CWF	Drains to Stocked Trout Stream	0.91	February 15 – June 1	Temporary Mat
0.65	S03	UNT to Marsh Creek	Perennial	3	Drains to CWF	Drains to Stocked Trout Stream	0.86	February 15 – June 1	Dry Crossing
0.75	S04	UNT to Marsh Creek	Perennial	3	Drains to CWF	Drains to Stocked Trout Stream	0.65	February 15 – June 1	Dry Crossing
0.80	S05[g]	UNT to Marsh Creek	Ephemeral	Dry	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing
1.85	S06[g]	UNT to North Branch Cowanesque River	Intermittent	0.5[i]	Drains to CWF	Drains to Stocked Trout Stream	0.80	February 15 – June 1	Temporary Mat
1.85	S07[g]	UNT to North Branch Cowanesque River	Intermittent	0.5[i]	Drains to CWF	Drains to Stocked Trout Stream	0.70	February 15 – June 1	Temporary Mat
1.90	S08[g]	UNT to North Branch Cowanesque River	Ephemeral	Dry	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing
1.98	S09[g]	UNT to North Branch Cowanesque River	Ephemeral	Dry	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing
1.98	S10[g]	UNT to North Branch Cowanesque River	Ephemeral	Dry	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing
2.18	S11	UNT to North Branch Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.58	February 15 – June 1	Dry Crossing
2.20	S12	North Branch Cowanesque River	Perennial	4	CWF	Drains to Stocked Trout Stream	0.71	February 15 – June 1	Dry Crossing
2.25	S13	North Branch Cowanesque River	Perennial	3	Drains to CWF	Drains to Stocked Trout Stream	0.71	February 15 – June 1	Dry Crossing
2.30	D01	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Dry Crossing

Approximate Milepost	Waterbody I.D.[a]	Stream Name[b]	Flow Regime	Water Width (feet)	PA Chapter 93 Classification[c]	PAFBC Stream Designation	Level 2 Rapid Assessment Riverine Condition Index[d]	Anticipated Construction Timing Restriction[e]	Proposed Crossing Method[f]
2.70	S14	UNT to North Branch Cowanesque River	Perennial	3	CWF	Drains to Stocked Trout Stream	0.70	February 15 – June 1	Dry Crossing
2.80	D02	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Dry Crossing
2.80	D03	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Temporary Mat
3.30	S15[g]	UNT to North Branch Cowanesque River	Ephemeral	Dry	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing
3.40	S16	UNT to North Branch Cowanesque River	Perennial	3	Drains to CWF	Drains to Stocked Trout Stream	0.82	February 15 – June 1	Dry Crossing
Mainline Pipeline (YM59 Pipeline)									
2.10	S17	North Fork Cowanesque River	Perennial	3	Drains to CWF	Drains to Stocked Trout Stream	0.70	February 15 – June 1	Dry Crossing
2.10	D05	Drains to UNT to North Fork of Cowanesque River	Ephemeral Ditch	0.5	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Temporary Mat
2.27	S18a	UNT to North Fork of Cowanesque River	Perennial	20	Drains to CWF	Drains to Stocked Trout Stream	0.81	February 15- June 1	Dry Crossing
2.87	D07	Drains to UNT to North Fork of Cowanesque River	Ephemeral Ditch	Dry	N/A	Drains to UNT that Drains to Stocked Trout Stream	-	N/A	Dry Crossing
Access Roads									
Z20 TAR-1	S03	UNT to Marsh Creek	Perennial	8	Drains to CWF	Drains to Stocked Trout Stream	0.86	February 15 – June 1	Existing Culvert
Aboveground Facilities									
Ellisburg CS	S55	Rose Lake Run	Perennial	2.5[i]	HQ-CWF	Class A Trout Stream	0.37	No Impact	Existing Road and Culvert
Z20 Pipeline Valve Setting	S73z[g]	UNT to Marsh Creek	Intermittent	6[i]	Drains to CWF	Drains to Stocked Trout Stream	0.52	February 15 – June 1	Temporary Mat

Notes:
a Prefix to resource identification numbers include S = stream and D = ditch.
b UNT = unnamed tributary
c CWF = Coldwater Fishes, WWF = Warmwater Fishes, N/A = Not Applicable
d Level 2 Rapid Assessment Condition Index forms were not calculated for ephemeral streams.

Approximate Milepost	Waterbody I.D.[a]	Stream Name[b]	Flow Regime	Water Width (feet)	PA Chapter 93 Classification[c]	PAFBC Stream Designation	Level 2 Rapid Assessment Riverine Condition Index[d]	Anticipated Construction Timing Restriction[e]	Proposed Crossing Method[f]

e Waterbody crossing timing restrictions reflect periods when no in-stream work is permitted. National Fuel will comply with the final required timing restrictions as defined in the PA DEP Chapter 105 Water Obstruction and Encroachment Permit and any other applicable state agency approvals.
f Dry Crossing Method = either dam and flume or dam and pump method. If stream has no perceptible flow at the time of crossing, an open cut method may be used with materials and provisions on hand to quickly shift to a dry crossing method in the event stream begins to flow before completion of the crossing. In the event that no waterflow is observed at the time of construction, National Fuel will utilize an open-cut crossing method.
g The area of the basin which feeds the stream is less than 100 acres and is considered waived from fee calculations (Chapter 105.12 (a) (2)).
h Site Plans are located in Attachment 6 of the JPA.
i Stream is not crossed by the pipeline but is located within the workspace. These features will not be excavated/trenched but will be temporarily matted.

Source for state stream designations: PADEP 2024b, PAFBC 2024.

Table S3.C-1 Impacted Area of Wetlands Crossed by the Tioga Pathway Project, Potter County

Approximate Milepost	Wetland I.D.	Latitude	Longitude	Municipality	Temporary Impacts (Acres)[af]			Permanent Impacts (Acres)[bf]			Subfacility Code[c]	Site Plan Reference[d]
					PEM	PSS	PFO	PEM	PSS	PFO		
Replacement Pipeline (Z20 Pipeline)												
0.00	W01z	41.966832	-77.718405	Harrison	0.027	-	-	0.000	-	-	TMPWI	Figure 1
0.10	W01	41.967236	-77.715901	Harrison	-	0.355	-	-	0.000	-	PIPE; TMPWI; WTDIM	Figure 2
0.70	W02	41.968985	-77.705062	Harrison	0.516	0.351	-	0.000	0.000	-	PIPE; TMPWI; WTDIM	Figures 3, 3.1
1.35	W03	41.971927	-77.692612	Harrison	0.025	-	0.145	0.000	-	0.000	PIPE; TMPWI; WTDIM	Figure 4
1.84	W04	41.974176	-77.683657	Harrison	0.194	-	0.195	0.000	-	0.000	PIPE; TMPWI; WTDIM	Figures 5, 5.1
1.95	W05	41.974656	-77.681935	Harrison	0.114	-	-	0.000	-	-	PIPE; TMPWI; WTDIM	Figure 6
2.16	W06	41.976286	-77.67759	Harrison	0.157	0. 842	-	0.000	0.000	-	PIPE; TMPWI; WTDIM	Figures 7, 7.1
2.72	W07	41.978328	-77.668284	Harrison	0.103	-	0.0002	0.000	-	0.000	PIPE; TMPWI; WTDIM	Figure 8
3.38	W08	41.980661	-77.655791	Harrison	0.057	-	-	0.000	-	-	PIPE; TMPWI; WTDIM	Figure 10
Mainline Pipeline (YM59 Pipeline)												
2.35	W10	41.964401	-77.616983	Harrison	-	-	0.044	-	-	0.030	PIPE; TMPWI; WTDIM	Figure 13
Aboveground Facilities												
Ellisburg CS	W45	41.899303	-77.914484	Allegany	0.000	-	-	0.000	-	-	Resource will be avoided – no impacts.	Figure E-1
Ellisburg CS	W46	41.89984	-77.913537	Allegany	0.000	-	-	0.000	-	-	Resource will be avoided – no impacts.	Figure E-1
Ellisburg CS	W47	41.902289	-77.914483	Allegany	0.000	-	-	0.000	-	-	Resource will be avoided – no impacts.	Figure E-2
Access Roads												
Z20 TAR-1	W02	41.968985	-77.705062	Harrison	0.013	-	-	0.000	-	-	TMPWI	Figure 14
				Potter County Totals[e]	**1.206**	**1.548**	**0.384**	**0.000**	**0.000**	**0.030**		

Notes:

a Per DEP, "Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This **does not include areas that will be maintained** as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts)." Accordingly, these values reflect the entire 75-foot-wide limit of disturbance through regulated wetlands minus the maintained areas described in the permanent impacts below. Note: all wetland impacts associated with the Z20 replacement pipeline are considered temporary as they will occur within an existing pipeline ROW.

b Per DEP, "Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and **include areas necessary for the operation and maintenance of the water obstruction** or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water." Accordingly, these values represent the acreage of vegetation cover type that will be converted from

Approximate Milepost	Wetland I.D.	Latitude	Longitude	Municipality	Temporary Impacts (Acres)[af]			Permanent Impacts (Acres)[bf]			Subfacility Code[c]	Site Plan Reference[d]
					PEM	PSS	PFO	PEM	PSS	PFO		

PFO or PSS to a lower successional cover type (e.g., PSS or PEM) because of vegetation maintenance procedures within the 30-foot-wide portion of the permanent ROW that will undergo routine vegetation maintenance. Specifically, in accordance with the FERC Procedures, National Fuel will not conduct routine vegetation mowing or clearing over the full width of the permanent ROW. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared through all wetlands (PEM, PSS, PFO) at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, PFO trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent ROW.

c Subfacility Code Definitions:

- **PIPE**: This subfacility code is used for any pipe or pipeline constructed for the transportation of a gaseous, liquid, liquefiable or slurry substance or, any cable, conduit, line or wire for the transmission of electrical energy, telephone, telegraph, radio or television signals including cathodic corrosion protection placed in, along, under, across or over regulated waters of the Commonwealth.
- **TMPWI**: This subfacility is used when direct or indirect impacts to wetlands occur on a temporary basis.
- **WTDIM**: This subfacility is used for all direct permanent wetland impacts regardless of their nature or size. Activities such as fills, excavation, inundation, draining, infiltration trenches, etc.

d Site Plans are provided in Attachment 6 of this Joint Permit Application.

e Total Impacts were calculated using raw, unrounded GIS spatial calculations and rounded after totaling individual acreages. Therefore, total county impacts may not equal the total of rounded acreages presented for each individual resource.

f Acreages were determined using GIS software to calculate the acreage of the field delineated spatial data. Each polygon was broken down by cover type, followed by permanent or temporary impact.

Table S3.C-2 Impacted Area of Waterbodies Crossed by the Tioga Pathway Project, Potter County

Milepost	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]	Site Plan Reference[j]
								Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]		
Replacement Pipeline (Z20 Pipeline)													
0.05	D-03z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Not Applicable									
0.05	D-04z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Not Applicable									
0.05	D-08z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Not Applicable									
0.10	S01	Marsh Creek	Perennial	12	Harrison	41.967218	-77.716046	0.029	0.000	0.477	0.000	PIPE; BRDG: FLACT	Figures 2, 2A
0.10	S02	UNT to Marsh Creek	Perennial	2[f]	Harrison	41.967179	-77.716108	0.002	0.000			BRDG: FLACT	Figure 2
0.65	S03	UNT to Marsh Creek	Perennial	8	Harrison	41.968702	-77.705193	0.023	0.000	0.290	0.000	PIPE; BRDG: FLACT	Figure 3, 3A
0.75	S04	UNT to Marsh Creek	Perennial	6	Harrison	41.969286	-77.703812	0.020	0.000	0.333	0.000	PIPE; BRDG: FLACT	Figures 3.1, 3B
0.80	S05[g]	UNT to Marsh Creek	Ephemeral	10	Harrison	41.969407	-77.703308	0.022	0.000	0.235	0.000	PIPE; BRDG: FLACT	Figures 3.2, 3B
1.85	S06[g]	UNT to North Branch Cowanesque River	Intermittent	15[f]	Harrison	41.974183	-77.683917	0.024	0.000	0.439	0.000	BRDG: FLACT	Figure 5
1.85	S07[g]	UNT to North Branch Cowanesque River	Intermittent	15[f]	Harrison	41.974085	-77.684287	0.025	0.000			BRDG: FLACT	Figure 5
1.90	S08[g]	UNT to North Branch Cowanesque River	Ephemeral	8	Harrison	41.97441	-77.682827	0.015	0.000	0.202	0.000	PIPE; BRDG: FLACT	Figures 5.1, 5A
1.98	S09[g]	UNT to North Branch Cowanesque River	Ephemeral	20	Harrison	41.974737	-77.681639	0.069	0.000	0.427	0.000	PIPE; BRDG: FLACT	Figures 6, 6A
1.98	S10[g]	UNT to North Branch Cowanesque River	Ephemeral	5	Harrison	41.974835	-77.681285	0.010	0.000			PIPE; BRDG: FLACT	Figures 6, 6A
2.18	S11	UNT to North Branch Cowanesque River	Perennial	2	Harrison	41.976008	-77.678276	0.003	0.000	0.223	0.000	PIPE; BRDG: FLACT	Figures 7, 7A
2.20	S12	North Branch Cowanesque River	Perennial	10	Harrison	41.976395	-77.677322	0.038	0.000	0.493	0.000	PIPE; BRDG: FLACT	Figures 7.1, 7B
2.25	S13	North Branch Cowanesque River	Perennial	8	Harrison	41.976543	-77.676957	0.015	0.000			PIPE; BRDG: FLACT	Figures 7.1, 7B
2.30	D01	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Not Applicable									
2.70	S14	UNT to North Branch Cowanesque River	Perennial	6	Harrison	41.978337	-77.668231	0.012	0.000	0.202	0.000	PIPE; BRDG: FLACT	Figures 8, 8A
2.80	D02	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Not Applicable									
2.80	D03	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Not Applicable									

Milepost	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]	Site Plan Reference[j]
								Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]		
3.30	S15[g]	UNT to North Branch Cowanesque River	Ephemeral	5	Harrison	41.98024	-77.657616	0.010	0.000	0.214	0.000	PIPE; BRDG: FLACT	Figures 9, 9A
3.40	S16	UNT to North Branch Cowanesque River	Perennial	20	Harrison	41.980684	-77.655608	0.039	0.000	0.282	0.000	PIPE; BRDG: FLACT	Figures 10, 10A
Mainline Pipeline (YM59 Pipeline)													
2.10	S17	North Fork Cowanesque River	Perennial	15	Harrison	41.967015	-77.61861	0.024	0.003	0.181	0.027	PIPE; BRDG: FLACT	Figures 11, 11A
2.10	D05	Drains to UNT to North Fork of Cowanesque River	Ephemeral Ditch	Not Applicable									
2.27	S18a	UNT to North Fork of Cowanesque River	Perennial	20	Harrison	41.96481	-77.6179	0.034	0.005	0.201	0.030	PIPE; BRDG: FLACT	Figures 12, 12A
2.87	D07	Drains to UNT to North Fork of Cowanesque River	Ephemeral Ditch	Not Applicable									
Access Roads													
TAR-1	S03	UNT to Marsh Creek	Perennial	8	Harrison	41.968623	-77.704686	0.007	0.000	0.220	0.000	Existing culvert: FLACT	Figure 14
Aboveground Facilities													
Ellisburg CS	S55	Rose Lake Run	Perennial	9[f]	Allegheny	41.899581	-77.913991	0.000	0.000	0.000	0.000	Existing culvert and road	Figure E-1
Z20 Pipeline Valve Setting	S73z[g]	UNT to Marsh Creek	Intermittent	12[f]	Harrison	41.966834	-77.718357	0.025	0.000	0.215	0.022	BRDG; FLACT	Figure 1
							Potter County Totals[h]	**0.443**	**0.008**	**4.634**	**0.079**		

Notes:

a Prefix to resource identification numbers include S = stream and D = ditch.

b UNT = unnamed tributary

c Per DEP, "Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This **does not include areas that will be maintained** as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts)." Accordingly, these values reflect the entire 75-foot-wide limit of disturbance through regulated stream and floodway resources minus the maintained areas described in the permanent impacts below. Note: all stream/floodway impacts associated with the Z20 replacement pipeline are considered temporary as they will occur within an existing pipeline ROW.

d Per DEP, "Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and include areas necessary for the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water." All streams and floodways will be restored to pre-existing conditions and there will be no long-term impact to the substrate, banks, flow, aquatic/terrestrial life, or floodway; with the exception of S73z where the corner of a small gravel pad will be placed in the floodway. However, National Fuel will maintain a 10-foot-wide corridor centered over the pipeline in an herbaceous state and has conservatively identified stream and floodway impacts within this corridor as permanent.

e Subfacility Code Definitions:

- **PIPE**: This subfacility is used for any pipe or pipeline constructed for the transportation of a gaseous, liquid, liquefiable or slurry substance or, any cable, conduit, line or wire for the transmission of electrical energy, telephone, telegraph, radio or television signals including cathodic corrosion protection placed in, along, under, across or over regulated waters of the Commonwealth.

Milepost	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]	Site Plan Reference[j]
								Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]		

- **CULV**: This subfacility is used when a structure with appurtenant works that carries a stream under or through an embankment or fill is constructed. Culverts are 100 feet and less in length upstream to downstream.
- **FLACT**: This subfacility is used for activities or structures encroaching upon or obstructing the floodway.
- **BRDG**: This subfacility is used when a structure and its appurtenant works is erected over regulated waters of the Commonwealth.

f Stream is not crossed by the pipeline but is located within the workspace. These features will not be excavated/trenched but will be temporarily matted.
g The area of the basin which feeds the stream is less than 100 acres and is considered waived from fee calculations per Chapter 105.12 (a) (2).
h Total Impacts were calculated using raw, unrounded GIS spatial calculations and rounded after totaling individual acreages. Therefore, total county impacts may not equal the total of the rounded acreages for each individual resource.
i Acreages were determined using GIS software to calculate the acreage of the field delineated spatial data (or floodway area calculated buffer either side of stream spatial data). Each polygon was broken down by stream or floodway, followed by permanent or temporary impact.
j Site Plans are provided in Attachment 6 of this Joint Permit Application.

Table S3.C-3 Impacted Area of All Wetlands Crossed by the Tioga Pathway Project

Approximate Milepost	County	Wetland I.D.	Latitude	Longitude	Municipality	Temporary Impacts (Acres)[ae]			Permanent Impacts (Acres)[be]			Subfacility Code[c]
						PEM	PSS	PFO	PEM	PSS	PFO	
Replacement Pipeline (Z20 Pipeline)												
0.00	Potter	W01z	41.966832	-77.718405	Harrison	0.027	-	-	0.000	-	-	TMPWI; WTDIM
0.10	Potter	W01	41.967236	-77.715901	Harrison	-	0.355	-	-	0.000	-	PIPE; TMPWI; WTDIM
0.70	Potter	W02	41.968985	-77.705062	Harrison	0.516	0.351	-	0.000	0.000	-	PIPE; TMPWI; WTDIM
1.35	Potter	W03	41.971927	-77.692612	Harrison	0.025	-	0.145	0.000	-	0.000	PIPE; TMPWI; WTDIM
1.84	Potter	W04	41.974176	-77.683657	Harrison	0.194	-	0.195	0.000	-	0.000	PIPE; TMPWI; WTDIM
1.95	Potter	W05	41.974656	-77.681935	Harrison	0.114	-	-	0.000	-	-	PIPE; TMPWI; WTDIM
2.16	Potter	W06	41.976286	-77.67759	Harrison	0.157	0. 842	-	0.000	0.000	-	PIPE; TMPWI; WTDIM
2.72	Potter	W07	41.978328	-77.668284	Harrison	0.103	-	0.0002	0.000	-	0.000	PIPE; TMPWI; WTDIM
3.38	Potter	W08	41.980661	-77.655791	Harrison	0.057	-	-	0.000	-	-	PIPE; TMPWI; WTDIM
Mainline Pipeline (YM59 Pipeline)												
2.35	Potter	W10	41.964401	-77.616983	Harrison	-	-	0.044	-	-	0.030	PIPE; TMPWI; WTDIM
2.96	Tioga	W14	41.959947	-77.608239	Brookfield	0.029	0.003	-	0.001	0.000	-	TMPWI
3.00			41.959644	-77.607951				-			-	TMPWI
3.16			41.958172	-77.605524				-			-	PIPE; TMPWI; WTDIM
3.25	Tioga	W15	41.958363	-77.604067	Brookfield	0.013	-	-	0.000	-	-	TMPWI; WTDIM
3.68	Tioga	W60	41.961121	-77.590769	Brookfield	0.090	-	-	0.004	-	-	PIPE: TMPWI; WTDIM
4.02	Tioga	W16	41.962623	-77.581196	Brookfield	0.008	-	-	0.000	-	-	TMPWI; WTDIM
4.54	Tioga	W17	41.958363	-77.604067	Brookfield	0.275	0.200	0.119	0.038	0.029	0.091	PIPE; TMPWI; WTDIM
4.65	Tioga	W18	41.962702	-77.579489	Brookfield	-	0.094	-	-	0.011	-	PIPE; TMPWI; WTDIM
5.34	Tioga	W20	41.963814	-77.567067	Brookfield	0.017	-	-	0.003	-	-	PIPE; TMPWI; WTDIM
5.70	Tioga	W21	41.967169	-77.561953	Brookfield	0.445	-	-	0.066	-	-	PIPE; TMPWI; WTDIM
9.56	Tioga	W55	41.931374	-77.518473	Westfield	-	-	0.110	-	-	0.057	PIPE; TMPWI; WTDIM
9.70	Tioga	W57	41.929735	-77.517648	Westfield	0.016	-	-	0.000	-	-	TMPWI; WTDIM
9.80	Tioga	W58	41.928311	-77.516974	Westfield	0.181	-	-	0.003	-	-	PIPE; TMPWI; WTDIM
9.85	Tioga	W59	41.927243	-77.516526	Westfield	0.049	-	-	0.005	-	-	PIPE; TMPWI; WTDIM

Approximate Milepost	County	Wetland I.D.	Latitude	Longitude	Municipality	Temporary Impacts (Acres)[ae]			Permanent Impacts (Acres)[be]			Subfacility Code[c]
						PEM	PSS	PFO	PEM	PSS	PFO	
10.00	Tioga	W23	41.925353	-77.516037	Westfield	0.104	-	-	0.002	-	-	PIPE; TMPWI; WTDIM
10.05	Tioga	W24	41.924788	-77.51574	Westfield	0.021	-	-	0.000	-	-	TMPWI; WTDIM
12.12	Tioga	W29	41.913929	-77.482821	Westfield	0.199	-	-	0.037	-	-	PIPE; TMPWI; WTDIM
14.78	Tioga	W32	41.914179	-77.438402	Deerfield	0.021	-	-	0.000	-	-	TMPWI; WTDIM
14.82	Tioga	W31	41.914442	-77.437616	Deerfield	-	0.018	-	-	0.004	-	PIPE; TMPWI; WTDIM
15.50	Tioga	W34	41.911875	-77.425407	Deerfield	0.508	-	-	0.079	-	-	PIPE; TMPWI; WTDIM
15.68	Tioga	W35	41.910894	-77.422991	Deerfield	0.090	-	-	0.014	-	-	PIPE; TMPWI; WTDIM
15.74	Tioga	W36	41.910879	-77.422235	Deerfield	0.160	-	-	0.026	-	-	PIPE; TMPWI; WTDIM
16.48	Tioga	W38	41.90693	-77.409351	Chatham	0.027	-	-	0.003	-	-	PIPE; TMPWI; WTDIM
16.93	Tioga	W39	41.903544	-77.404032	Chatham	0.022	-	-	0.000	-	-	TMPWI
17.16	Tioga	W40	41.903838	-77.399772	Chatham	-	-	0.081	-	-	0.079	PIPE; TMPWI; WTDIM
17.50	Tioga	W41	41.901814	-77.394413	Chatham	0.009	-	-	0.000	-	-	TMPWI
18.30	Tioga	W42	41.900397	-77.381429	Chatham	0.229	-	0.152	0.051	-	0.042	PIPE; TMPWI; WTDIM
18.82	Tioga	W43	41.90299	-77.37074	Chatham	0.670	-	-	0.109	-	-	PIPE; TMPWI; WTDIM
Cathodic Protection Ground Bed A (YM59 3.8)	Tioga	W54	41.957508	-77.593568	Brookfield	0.018	-	-	0.011	-	-	PIPE; TMPWI; WTDIM
Aboveground Facilities												
Ellisburg CS	Potter	W45	41.899303	-77.914484	Allegany	0.000	-	-	0.000	-	-	Resource will be avoided – no impacts.
Ellisburg CS	Potter	W46	41.89984	-77.913537	Allegany	0.000	-	-	0.000	-	-	Resource will be avoided – no impacts.
Ellisburg CS	Potter	W47	41.902289	-77.914483	Allegany	0.000	-	-	0.000	-	-	Resource will be avoided – no impacts.
Access Roads												
Z20 TAR-1	Potter	W02	41.968985	-77.705062	Harrison	0.013	-	-	0.000	-	-	TMPWI
YM59 TAR-10	Tioga	W23	41.925518	-77.51516	Westfield	0.025	-	-	0.000	-	-	TMPWI
YM59 TAR-3	Tioga	W54	41.957508	-77.593568	Brookfield	0.103	-	-	0.000	-	-	TMPWI
YM59 TAR-10A	Tioga	W56	41.924483	-77.521624	Westfield	0.013	-	-	0.000	-	-	TMPWI
YM59 PAR-9	Tioga	W61	41.915268	-77.482257	Westfield	0.000	-	-	0.002	-	-	WTDIM

Approximate Milepost	County	Wetland I.D.	Latitude	Longitude	Municipality	Temporary Impacts (Acres)[ae]			Permanent Impacts (Acres)[be]			Subfacility Code[c]
						PEM	PSS	PFO	PEM	PSS	PFO	
					Project Totals[d]	**4.548**	**1.863**	**0.846**	**0.454**	**0.044**	**0.299**	

Notes:

a Per DEP, "Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This **does not include areas that will be maintained** as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts)." Accordingly, these values reflect the entire 75-foot-wide limit of disturbance through regulated wetlands minus the maintained areas described in the permanent impacts below. Note: all wetland impacts associated with the Z20 replacement pipeline are considered temporary as they will occur within an existing pipeline ROW.

b Per DEP, "Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and **include areas necessary for the operation and maintenance of the water obstruction** or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water." Accordingly, these values represent the acreage of cover type conversion due to vegetation maintenance procedures within the 30-foot-wide portion of the permanent ROW. Specifically, in accordance with the FERC Procedures, National Fuel will not conduct routine vegetation mowing or clearing over the full width of the permanent ROW. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared through all wetlands (PEM, PSS, PFO) at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, PFO trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent ROW. National Fuel will not conduct any routine vegetation mowing or clearing in wetlands located between HDD entry and exit points (W58, W59, W23) but has included at permanent impact in these areas based on the width of the pipeline (2 feet) times the length of the wetland at centerline.

c Subfacility Code Definitions:

- **PIPE**: This subfacility code is used for any pipe or pipeline constructed for the transportation of a gaseous, liquid, liquefiable or slurry substance or, any cable, conduit, line or wire for the transmission of electrical energy, telephone, telegraph, radio or television signals including cathodic corrosion protection placed in, along, under, across or over regulated waters of the Commonwealth.
- **TMPWI**: This subfacility is used when direct or indirect impacts to wetlands occur on a temporary basis.
- **WTDIM**: This subfacility is used for all direct permanent wetland impacts regardless of their nature or size. Activities such as fills, excavation, inundation, draining, infiltration trenches, etc.

d Total Impacts were calculated using raw, unrounded GIS spatial calculations and rounded after totaling individual acreages. Therefore, total county impacts may not equal the total of rounded acreages presented for each individual resource.

e Acreages were determined using GIS software to calculate the acreage of the field delineated spatial data. Each polygon was broken down by cover class type, followed by permanent or temporary impact.

Table S3.C-4 Impacted Area of All Waterbodies Crossed by the Tioga Pathway Project

Milepost	County	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]
									Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
Replacement Pipeline (Z20 Pipeline)													
0.05	Potter	D-03z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Not Applicable								
0.05	Potter	D-04z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Not Applicable								
0.05	Potter	D-08z	Drains to UNT of Marsh Creek	Ephemeral Ditch	Not Applicable								
0.10	Potter	S01	Marsh Creek	Perennial	12	Harrison	41.967218	-77.716046	0.029	0.000	0.477	0.000	PIPE; BRDG: FLACT
0.10	Potter	S02	UNT to Marsh Creek	Perennial	2[f]	Harrison	41.967179	-77.716108	0.002	0.000			BRDG: FLACT
0.65	Potter	S03	UNT to Marsh Creek	Perennial	8	Harrison	41.968702	-77.705193	0.023	0.000	0.290	0.000	PIPE; BRDG: FLACT
0.75	Potter	S04	UNT to Marsh Creek	Perennial	6	Harrison	41.969286	-77.703812	0.020	0.000	0.333	0.000	PIPE; BRDG: FLACT
0.80	Potter	S05[g]	UNT to Marsh Creek	Ephemeral	10	Harrison	41.969407	-77.703308	0.022	0.000	0.235	0.000	PIPE; BRDG: FLACT
1.85	Potter	S06[g]	UNT to North Branch Cowanesque River	Intermittent	15[f]	Harrison	41.974183	-77.683917	0.024	0.000	0.439	0.000	BRDG: FLACT
1.85	Potter	S07[g]	UNT to North Branch Cowanesque River	Intermittent	15[f]	Harrison	41.974085	-77.684287	0.025	0.000			BRDG: FLACT
1.90	Potter	S08[g]	UNT to North Branch Cowanesque River	Ephemeral	8	Harrison	41.97441	-77.682827	0.015	0.000	0.202	0.000	PIPE; BRDG: FLACT
1.98	Potter	S09[g]	UNT to North Branch Cowanesque River	Ephemeral	20	Harrison	41.974737	-77.681639	0.069	0.000	0.427	0.000	PIPE; BRDG: FLACT
1.98	Potter	S10[g]	UNT to North Branch Cowanesque River	Ephemeral	5	Harrison	41.974835	-77.681285	0.010	0.000			PIPE; BRDG: FLACT
2.18	Potter	S11	UNT to North Branch Cowanesque River	Perennial	2	Harrison	41.976008	-77.678276	0.003	0.000	0.223	0.000	PIPE; BRDG: FLACT
2.20	Potter	S12	North Branch Cowanesque River	Perennial	10	Harrison	41.976395	-77.677322	0.038	0.000	0.493	0.000	PIPE; BRDG: FLACT
2.25	Potter	S13	North Branch Cowanesque River	Perennial	8	Harrison	41.976543	-77.676957	0.015	0.000			PIPE; BRDG: FLACT
2.30	Potter	D01	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Not Applicable								
2.70	Potter	S14	UNT to North Branch Cowanesque River	Perennial	6	Harrison	41.978337	-77.668231	0.012	0.000	0.202	0.000	PIPE; BRDG: FLACT
2.80	Potter	D02	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Not Applicable								
2.80	Potter	D03	Drains to UNT to North Branch Cowanesque River	Ephemeral Ditch	Not Applicable								
3.30	Potter	S15[g]	UNT to North Branch Cowanesque River	Ephemeral	5	Harrison	41.98024	-77.657616	0.010	0.000	0.214	0.000	PIPE; BRDG: FLACT

Milepost	County	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]
									Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
3.40	Potter	S16	UNT to North Branch Cowanesque River	Perennial	20	Harrison	41.980684	-77.655608	0.039	0.000	0.282	0.000	PIPE; BRDG: FLACT
Mainline Pipeline (YM59 Pipeline)													
2.10	Potter	S17	North Fork Cowanesque River	Perennial	15	Harrison	41.967015	-77.61861	0.024	0.003	0.181	0.027	PIPE; BRDG: FLACT
2.10	Potter	D05	N/A	Ephemeral Ditch	Not Applicable								
2.27	Potter	S18a	UNT to North Fork of Cowanesque River	Perennial	20	Harrison	41.96481	-77.6179	0.034	0.005	0.201	0.030	PIPE; BRDG: FLACT
2.87	Potter	D07	N/A	Ephemeral Ditch	Not Applicable								
2.88	Tioga	S18	UNT to North Fork of Cowanesque River	Perennial	25[f]	Brookfield	41.960858	-77.608491	0.000	0.000	0.052	0.000	FLACT
3.00	Tioga	S19	UNT to North Fork of Cowanesque River	Perennial	10	Brookfield	41.958876	-77.606803	0.030	0.005	0.172	0.026	PIPE; BRDG: FLACT
											1.399	0.171	PIPE; BRDG: FLACT
3.25	Tioga	S20	North Fork Cowanesque River	Perennial	25	Brookfield	41.958269	-77.604058	0.045	0.006			PIPE; BRDG: FLACT
3.42	Tioga	Sw02	N/A	Man-made Swale	Not Applicable								
3.68	Tioga	S21	UNT to North Fork of Cowanesque River	Perennial	8	Brookfield	41.960571	-77.596576	0.013	0.002	0.168	0.026	PIPE; BRDG: FLACT
4.02	Tioga	S22	UNT to North Fork of Cowanesque River	Perennial	3	Brookfield	41.961059	-77.590698	0.005	0.001	0.160	0.025	PIPE; BRDG: FLACT
4.30	Tioga	S23	UNT to North Fork of Cowanesque River	Perennial	12	Brookfield	41.962633	-77.585936	0.019	0.003	0.183	0.027	PIPE; BRDG: FLACT
4.57	Tioga	S24	UNT to North Fork of Cowanesque River	Perennial	8	Brookfield	41.962671	-77.583404	0.041	0.007	0.565	0.086	PIPE; BRDG: FLACT
4.64	Tioga	S25	UNT to North Fork of Cowanesque River	Perennial	3[f]	Brookfield	41.962796	-77.57982	0.000	0.000	0.094	0.000	FLACT
5.33	Tioga	Sw05	N/A	Man-made Swale	Not Applicable								
5.34	Tioga	S28	UNT to California Brook	Perennial	6	Brookfield	41.963797	-77.566758	0.009	0.001	0.159	0.024	PIPE; BRDG: FLACT
5.59	Tioga	Sw04	N/A	Man-made Swale	Not Applicable								
5.74	Tioga	S26	California Brook	Perennial	15	Brookfield	41.967168	-77.561839	0.027	0.004	0.327	0.047	PIPE; BRDG: FLACT
5.78	Tioga	D10	N/A	Ephemeral Ditch	Not Applicable								
6.40	Tioga	S29[g]	UNT to California Brook	Ephemeral	4	Brookfield	41.965114	-77.549977	0.008	0.001	0.270	0.035	PIPE; BRDG: FLACT
6.45	Tioga	S30[g]	UNT to California Brook	Ephemeral	6	Brookfield	41.964569	-77.549209	0.009	0.001	0.162	0.025	PIPE; BRDG: FLACT
9.56	Tioga	S62	UNT to Cowanesque River	Perennial	10	Westfield	41.931261	-77.518355	0.018	0.003	0.251	0.030	PIPE; BRDG: FLACT

Milepost	County	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]
									Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
9.70	Tioga	S65	UNT to Cowanesque River	Ephemeral	1[f]	Westfield	41.927439	-77.516767	0.003	0.000	0.602	0.005	BRDG: FLACT
9.91	Tioga	D32	N/A	Ephemeral Ditch	Not Applicable								
9.98	Tioga	S31	UNT to Cowanesque River	Perennial	5	Westfield	41.925356	-77.515612	0.012	0.000	1.666	0.036	PIPE; BRDG: FLACT
10.04	Tioga	S32	Cowanesque River	Perennial	59	Westfield	41.924832	-77.515902	0.132	0.003			PIPE; BRDG: FLACT
10.10	Tioga	S33	UNT to Cowanesque River	Ephemeral	12[f]	Westfield	41.923983	-77.515853	0.025	0.001			BRDG: FLACT
12.05	Tioga	S39[g]	UNT to Jemison Creek	Ephemeral	5	Westfield	41.914324	-77.483963	0.012	0.002	0.250	0.032	PIPE; BRDG: FLACT
FIL R12.14	Tioga	S37	UNT to Jemison Creek	Intermittent	4[f]	Westfield	41.913881	-77.482558	0.000	0.000	0.113	0.010	BRDG: FLACT
12.14	Tioga	S38	UNT to Jemison Creek	Intermittent	2[f]	Westfield	41.913881	-77.482558	0.000	0.000			BRDG: FLACT
12.24	Tioga	S36	Jemison Creek	Perennial	20	Westfield	41.913886	-77.481102	0.034	0.006	0.471	0.053	PIPE; BRDG: FLACT
13.90	Tioga	Sw07	N/A	Man-made Swale	Not Applicable								
13.98	Tioga	Sw08	N/A	Man-made Swale	Not Applicable								
14.05	Tioga	Sw09	N/A	Man-made Swale	Not Applicable								
14.16	Tioga	S39a	UNT to Boatman Brook	Perennial	5	Deerfield	41.910238	-77.447776	0.008	0.001	0.159	0.025	PIPE; BRDG: FLACT
14.80	Tioga	D15	N/A	Ephemeral Ditch	Not Applicable								
14.80	Tioga	D16	N/A	Ephemeral Ditch	Not Applicable								
14.81	Tioga	S40	Boatman Brook	Perennial	12	Deerfield	41.914391	-77.43785	0.020	0.003	0.186	0.026	PIPE; BRDG: FLACT
14.96	Tioga	D18	N/A	Ephemeral Ditch	Not Applicable								
(Along YM59 PAR-10 near MP 14.97)	Tioga	D17	N/A	Ephemeral Ditch	Not Applicable								
15.02	Tioga	D19	N/A	Ephemeral Ditch	Not Applicable								
15.24	Tioga	S41[g]	UNT to Crooked Creek	Ephemeral	4[f]	Deerfield	41.913661	-77.430417	0.006	0.000	0.174	0.026	BRDG: FLACT
15.62	Tioga	S42	UNT to Crooked Creek	Intermittent	2[f]	Deerfield	41.911082	-77.424149	0.000	0.000	0.019	0.000	FLACT
15.66	Tioga	D21	N/A	Ephemeral Ditch	Not Applicable								
15.68	Tioga	S43[g]	UNT to Crooked Creek	Intermittent	2	Deerfield	41.910894	-77.422985	0.003	0.001	0.179	0.028	PIPE; BRDG: FLACT

Milepost	County	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]
									Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
16.20	Tioga	S44[g]	UNT to Crooked Creek	Intermittent	8	Chatham	41.907833	-77.414802	0.012	0.002	0.162	0.025	PIPE; BRDG: FLACT
16.50	Tioga	S45[g]	UNT to Crooked Creek	Intermittent	9	Chatham	41.906929	-77.40934	0.013	0.002	0.164	0.025	PIPE; BRDG: FLACT
16.54	Tioga	D22	N/A	Ephemeral Ditch	Not Applicable								
16.54	Tioga	S46	UNT to Crooked Creek	Intermittent	6[f]	Chatham	41.906927	-77.408497	0.000	0.000	0.065	0.000	FLACT
17.04	Tioga	S47	UNT to Crooked Creek	Perennial	15	Chatham	41.903123	-77.402116	0.023	0.003	0.192	0.027	PIPE; BRDG: FLACT
17.18	Tioga	S48	UNT to Crooked Creek	Perennial	6	Chatham	41.903839	-77.399686	0.011	0.001	0.353	0.050	PIPE; BRDG: FLACT
17.2	Tioga	S49[g]	UNT to Crooked Creek	Ephemeral	4	Chatham	41.903844	-77.399343	0.008	0.001			PIPE; BRDG: FLACT
17.42	Tioga	D24	N/A	Ephemeral Ditch	Not Applicable								
17.50	Tioga	S50[g]	UNT to Crooked Creek	Intermittent	11	Chatham	41.901756	-77.394562	0.018	0.003	0.236	0.028	PIPE; BRDG: FLACT
17.50	Tioga	S51[g]	UNT to Crooked Creek	Intermittent	1[f]	Chatham	41.90182	-77.394441	0.001	0.000			BRDG: FLACT
18.32	Tioga	S52	UNT to Crooked Creek	Perennial	12	Chatham	41.90069	-77.380339	0.042	0.005	0.247	0.030	PIPE; BRDG: FLACT
18.67	Tioga	Sw11	N/A	Man-made Swale	Not Applicable								
18.85	Tioga	S53	UNT to Losey Creek	Perennial	8	Chatham	41.902996	-77.370667	0.012	0.002	0.135	0.025	PIPE; BRDG: FLACT
19.15	Tioga	D26	N/A	Ephemeral Ditch	Not Applicable								
19.17	Tioga	S54[g]	UNT to Losey Creek	Ephemeral	1	Chatham	41.904183	-77.364778	0.002	0.000	0.175	0.028	PIPE; BRDG: FLACT
Cathodic Protection Ground Bed A (YM59 3.8)	Tioga	S66	UNT to North Fork of Cowanesque River	Ephemeral	1	Brookfield	41.957978	-77.593752	0.000	0.000	0.188	0.000	FLACT
Access Roads													
TAR-1	Potter	S03	UNT to Marsh Creek	Perennial	8	Harrison	41.968623	-77.704686	0.007	0.000	0.220	0.000	Existing culvert; FLACT
YM59 TAR-2	Tioga	S19	UNT to North Fork of Cowanesque River	Perennial	10[f]	Brookfield	41.959119	-77.604038	0.000	0.000	0.353	0.000	FLACT
YM59 TAR-2	Tioga	S20	North Fork Cowanesque River	Perennial	25[f]	Brookfield	41.958269	-77.604058	0.000	0.000			FLACT
YM59 TAR-4	Tioga	S23	UNT to North Fork of Cowanesque River	Perennial	12	Brookfield	41.962633	-77.585936	0.010	0.000	0.115	0.000	Existing culvert; FLACT
YM59 TAR-4	Tioga	S24	UNT to North Fork of Cowanesque River	Perennial	8	Brookfield	41.962671	-77.583404	0.006	0.000			Existing culvert; FLACT

Milepost	County	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]
									Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
YM59 TAR-4	Tioga	D09	UNT to North Fork of Cowanesque River	Intermittent Ditch	Not Applicable								
YM59 TAR-3	Tioga	S66	UNT to North Fork of Cowanesque River	Ephemeral	1	Brookfield	41.957978	-77.593752	0.000	0.000	0.248	0.000	FLACT
YM59 TAR-6	Tioga	S56[g]	UNT to California Brook	Intermittent	7	Brookfield	41.964514	-77.561691	0.006	0.000	0.095	0.000	Existing culvert; FLACT
YM59 TAR-6	Tioga	Sw04	N/A	Man-made swale	Not Applicable								
YM59 TAR-7	Tioga	S56a[g]	UNT to California Brook	Ephemeral	1	Brookfield	41.97045	-77.561435	0.001	0.000	0.072	0.000	Existing culvert; FLACT
YM59 TAR-7	Tioga	S57	UNT to California Brook	Intermittent	3	Brookfield	41.970564	-77.559798	0.002	0.000	0.075	0.000	Existing culvert; FLACT
YM59 TAR-7	Tioga	S58[g]	UNT to California Brook	Ephemeral	3	Brookfield	41.970287	-77.559319	0.002	0.000	0.336	0.000	CULV/BRDG; FLACT
YM59 TAR-7	Tioga	S59[g]	UNT to California Brook	Ephemeral	2	Brookfield	41.970209	-77.559236	0.012	0.000			CULV/BRDG; FLACT
YM59 TAR-10	Tioga	S31	UNT to Cowanesque River	Perennial	5	Westfield	41.925356	-77.515612	0.003	0.000	0.272	0.000	Existing culvert; FLACT
YM59 TAR-10	Tioga	S32	Cowanesque River	Perennial	59[f]	Westfield	41.925362	-77.515292	0.000	0.000			FLACT
YM59 TAR-10A	Tioga	S68	UNT to Cowanesque River	Perennial	6	Westfield	41.924484	-77.52163	0.004	0.000	1.078	0.000	CULV/BRDG; FLACT
YM59 TAR-10A	Tioga	S63	UNT to Cowanesque River	Perennial	50	Westfield	41.924073	-77.521176	0.041	0.000			CULV/BRDG; FLACT
YM59 TAR-10A	Tioga	S64	UNT to Cowanesque River	Perennial	20	Westfield	41.922196	-77.517457	0.014	0.000	0.086	0.000	BRDG; FLACT
YM59 TAR-10A	Tioga	S67	UNT to Cowanesque River	Perennial	6	Westfield	41.921871	-77.515732	0.006	0.000	0.087	0.000	Existing culvert; FLACT
YM59 PAR-7	Tioga	S39	UNT to Jemison Creek	Perennial	5	Westfield	41.910238	-77.447776	0.000	0.000	0.035	0.000	Existing culvert; FLACT
YM59 TAR-15	Tioga	S47	UNT to Crooked Creek	Perennial	15[f]	Chatham	41.903658	-77.402068	0.014	0.000	0.207	0.000	FLACT
YM59 TAR-11	Tioga	D33	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-10	Tioga	D17	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-10	Tioga	D18	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-13	Tioga	D25	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-13	Tioga	Sw10	N/A	Man-made Swale	Not Applicable								
YM59 PAR-14	Tioga	Sw12	N/A	Man-made Swale	Not Applicable								

Milepost	County	Feature ID[a]	Stream Name[b]	Flow Regime	Bank to Bank Width (feet)	Municipality	Latitude	Longitude	Streams[i]		Floodways[i]		Subfacility Code[e]
									Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
YM59 PAR-14	Tioga	Sw13	N/A	Man-made Swale	Not Applicable								
Aboveground Facilities													
Ellisburg CS	Potter	S55	Rose Lake Run	Perennial	9[f]	Allegheny	41.899581	-77.913991	0.000	0.000	0.000	0.000	Existing culvert and road
Z20 Pipeline Valve Setting	Potter	S73z[g]	UNT to Marsh Creek	Intermittent	12[f]	Harrison	41.966834	-77.718357	0.025	0.000	0.215	0.022	BRDG; FLACT
								Impact Totals[h]	**1.185**	**0.078**	**17.391**	**1.080**	

Notes:

a Prefix to resource identification numbers include S = stream and D = ditch.

b UNT = unnamed tributary

c Per DEP, "Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This **does not include areas that will be maintained** as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts)." Accordingly, these values reflect the entire 75-foot-wide limit of disturbance through regulated stream and floodway resources minus the maintained areas described in the permanent impacts below. Note: all stream/floodway impacts associated with the Z20 replacement pipeline are considered temporary as they will occur within an existing pipeline ROW.

d Per DEP, "Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and **include areas necessary for the operation and maintenance of the water obstruction** or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water." All streams and floodways will be restored to pre-existing conditions and there will be no long-term impact to the substrate, banks, flow, aquatic/terrestrial life, or floodway. However, National Fuel will maintain a 10 feet wide corridor centered over the pipeline in an herbaceous state and has conservatively identified stream and floodway impacts within this corridor as permanent. National Fuel will not conduct any routine vegetation mowing or clearing along the ROW located between HDD entry and exit points (S65, S31, S32, S33) but has included a permanent impact in these areas based on the width of the pipeline (2 feet) times the length of the stream/floodway crossing at centerline.

e Subfacility Code Definitions:

- **PIPE**: This subfacility is used for any pipe or pipeline constructed for the transportation of a gaseous, liquid, liquefiable or slurry substance or, any cable, conduit, line or wire for the transmission of electrical energy, telephone, telegraph, radio or television signals including cathodic corrosion protection placed in, along, under, across or over regulated waters of the Commonwealth.
- **CULV**: This subfacility is used when a structure with appurtenant works that carries a stream under or through an embankment or fill is constructed. Culverts are 100 feet and less in length upstream to downstream.
- **FLACT**: This subfacility is used for activities or structures encroaching upon or obstructing the floodway.
- **BRDG**: This subfacility is used when a structure and its appurtenant works is erected over regulated waters of the Commonwealth.

f Stream is not crossed by the pipeline but is located within the workspace. These features will not be excavated/trenched but will be temporarily matted.

g The area of the basin which feeds the stream is less than 100 acres and is considered waived from fee calculations per Chapter 105.12 (a) (2).

h Total Impacts were calculated using raw, unrounded GIS spatial calculations and rounded after totaling individual acreages. Therefore, total county impacts may not equal the total of each rounded acreages presented.

i Acreages were determined using GIS software to calculate the acreage of the field delineated spatial data (or floodway area calculated buffer either side of stream spatial data). Each polygon was broken down by stream or floodway, followed by permanent or temporary impact.