ATTACHMENT 10

ENVIRONMENTAL ASSESSMENT FORM

Appendix B: Aquatic Resource Tables

Revised June 2025

Tioga County

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

Table S2.B-1. General Characteristics of Wetlands Crossed by the Tioga Pathway Project, Tioga County

Approximate Milepost	Wetland I.D.	Cowardin Classification[f]	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]
Mainline Pipeline (YM59 Pipeline)							
2.96, 3.00, 3.16	W14	PEM	5	0.58	N	Temporary Mat / Conventional Wetland Crossing	R2
		PSS	-		N	Temporary Mat	R3
3.25	W15	PEM	-	0.72	N	Temporary Mat	R2
3.68	W60	PEM	19	0.82	N	Conventional Wetland Crossing	R3
4.02	W16	PEM	-	0.59	N	Temporary Mat	R3
4.54	W17	PEM	165	0.12	N	Conventional Wetland Crossing	R3
		PSS	123		N	Conventional Wetland Crossing	R3
		PFO	135		N	Conventional Wetland Crossing	R3
4.65	W18	PSS	46	0.86	N	Conventional Wetland Crossing	FLn
5.34	W20	PEM	12	0.83	N	Conventional Wetland Crossing	DPx
5.70	W21	PEM	288	0.84	N	Conventional Wetland Crossing	R2
9.56	W55	PFO	82	0.87	N	Conventional Wetland Crossing	R3
9.70	W57	PEM	-	0.81	N	Temporary Mat	R4
9.80	W58	PEM	65	0.80	N	Conventional Wetland Crossing	R4
9.85	W59	PEM	66	0.79	N	Conventional Wetland Crossing	FLn
10.00	W23	PEM	48	0.70	N	HDD	R2c
10.05	W24	PEM	-	0.72	N	HDD	R2
12.12	W29	PEM	158	0.76	N	Conventional Wetland Crossing	R3c
14.82	W31	PSS	16	0.88	N	Conventional Wetland Crossing	R3
14.78	W32	PEM	-	0.82	N	Temporary Mat	FLn
15.50	W34	PEM	346	0.70	N	Conventional Wetland Crossing	FLn
15.68	W35	PEM	59	0.71	N	Conventional Wetland Crossing	R4
15.74	W36	PEM	113	0.76	N	Conventional Wetland Crossing	FLn

Approximate Milepost	Wetland I.D.	Cowardin Classification[f]	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]
16.48	W38	PEM	15	0.79	N	Conventional Wetland Crossing	R4
16.93	W39	PEM	-	0.73	N	Temporary Mat	DFC-DPh
17.16	W40	PFO	114	0.86	N	Conventional Wetland Crossing	R3c
17.50	W41	PEM	-	0.77	N	Conventional Wetland Crossing	R3c
18.30	W42	PFO	-	0.85	N	Conventional Wetland Crossing	R2
		PEM	245		N	Conventional Wetland Crossing	R2
18.82	W43	PEM	478	0.78	N	Conventional Wetland Crossing	DFC-DPh
Cathodic Protection Ground Bed A (YM59 3.8)	W54	PEM	-	0.79	N	Conventional Wetland Crossing	R4
Access Roads							
YM59 TAR-10	W23	PEM	-	0.70	N	Temporary Mat	R2c
YM59 TAR-3	W54	PEM	-	0.79	N	Temporary Mat	R4
YM59 PAR-5	W56	PEM	-	0.71	N	Temporary Mat	R2
YM59 PAR-9	W61	PEM	-	0.79	N	Permanent Fill	FLn

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
- R2c- Riverine floodplain complex
- R3- Riverine upper perennial
- R3c- Riverine headwater complex
- R4- Riverine intermittent
- FLn- Flat mineral soil
- DFC- Depression seasonal
- DPh – Depression...human impounded
- DPx- Depression…human excavated

f Cowardin classifications: PEM palustrine emergent; PSS = palustrine scrub-shrub; PFO = palustrine forested.

Table S2.B-2. General Characteristics of Waterbodies Crossed by the Tioga Pathway Project, Tioga 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]	Site Plan Figure Number[h]
Pipelines and Associated Aboveground Facilities										
Mainline Pipeline (YM59 Pipeline)										
2.88	S18	UNT to North Fork of Cowanesque River	Perennial	20	CWF	Drains to Stocked Trout Stream	0.81	February 15 – June 1	Temporary Mat	Figure 15
3.00	S19	UNT to North Fork of Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.69	February 15 – June 1	Dry Crossing	Figures 16, 16A, and 16B
3.25	S20	North Fork Cowanesque River	Perennial	6	CWF	Drains to Stocked Trout Stream	0.67	February 15 – June 1	Dry Crossing	Figures 16.1and 16C
3.42	Sw02	N/A	Man-made Swale	Not Applicable						
3.68	S21	UNT to North Fork of Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.94	February 15 – June 1	Dry Crossing	Figures 17 and 17A
4.02	S22	UNT to North Fork of Cowanesque River	Perennial	0.5	Drains to CWF	Drains to Stocked Trout Stream	0.50	February 15 – June 1	Dry Crossing	Figures 18 and 18A
4.30	S23	UNT to North Fork of Cowanesque River	Perennial	2	CWF	Drains to Stocked Trout Stream	0.79	February 15 – June 1	Dry Crossing	Figures 19 and 19A
4.57	S24	UNT to North Fork of Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.88	February 15 – June 1	Dry Crossing	Figures 20 and 20A
4.64	S25	UNT to North Fork of Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.90	February 15 – June 1	Temporary Mat	Figure 20 and 20.1
5.33	Sw05	N/A	Man-made Swale	Not Applicable						
5.34	S28	UNT to California Brook	Perennial	1	Drains to WWF	Drains to Stocked Trout Stream	0.70	February 15 – June 1	Dry Crossing	Figure 22
5.59	Sw04	N/A	Man-made Swale	Not Applicable						

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]	Site Plan Figure Number[h]
5.74	S26	California Brook	Perennial	3	WWF	Drains to Stocked Trout Stream	0.79	February 15 – June 1	Dry Crossing	Figures 23 and 23A
5.78	D10	N/A	Ephemeral Ditch	Not Applicable						
6.40	S29[g]	UNT to California Brook	Ephemeral	Dry	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing	Figures 24 and 24A
6.45	S30[g]	UNT to California Brook	Ephemeral	Dry	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing	Figures 24 and 24B
9.56	S62	UNT to Cowanesque River	Perennial	6	Drains to WWF	Drains to Stocked Trout Stream	0.69	February 15 – June 1	Dry Crossing	Figures 25 and 25A
9.70	S65	UNT to Cowanesque River	Ephemeral	1	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Temporary Mat	Figures 26, 27, and 27.1
9.91	D32	N/A	Ephemeral Ditch	Not Applicable						
9.98	S31	UNT to Cowanesque River	Perennial	1	Drains to WWF	Drains to Stocked Trout Stream	0.76	February 15 – June 1	HDD	Figures 28 and 28A
10.04	S32	Cowanesque River	Perennial	59	WWF	Stocked Trout Stream	0.75	February 15 – June 1	HDD	Figures 28 and 28B
10.10	S33	UNT to Cowanesque River	Ephemeral	Dry	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	HDD	Figure 28
12.05	S39[g]	UNT to Jemison Creek	Ephemeral	0.5	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing	Figures 29 and 29A
12.14	S37	UNT to Jemison Creek	Intermittent	3	Drains to WWF	Drains to Stocked Trout Stream	0.74	February 15 – June 1	Temporary Mat	Figure 30
12.14	S38	UNT to Jemison Creek	Intermittent	2	Drains to WWF	Drains to Stocked Trout Stream	0.45	February 15 – June 1	Temporary Mat	Figure 30
12.24	S36	Jemison Creek	Perennial	20	WWF	Drains to Stocked Trout Stream	0.61	February 15 – June 1	Dry Crossing	Figures 31 and 31A
13.90	Sw07	N/A	Man-made Swale	Not Applicable						

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]	Site Plan Figure Number[h]
13.98	Sw08	N/A	Man-made Swale	Not Applicable						
14.05	Sw09	N/A	Man-made Swale	Not Applicable						
14.16	S39a	UNT to Boatman Brook	Perennial	2	Drains to WWF	Drains to Stocked Trout Stream	0.50	February 15 – June 1	Dry Crossing	Figures 32 and 32A
14.80	D15	N/A	Ephemeral Ditch	Not Applicable						
14.80	D16	N/A	Ephemeral Ditch	Not Applicable						
14.81	S40	Boatman Brook	Perennial	3	WWF	Drains to Stocked Trout Stream	0.76	February 15 – June 1	Dry Crossing	Figures 33 and 33A
14.96	D18	N/A	Ephemeral Ditch	Not Applicable						
(Along PAR-10 near MP 14.97)	D17	N/A	Ephemeral Ditch	Not Applicable						
15.02	D19	N/A	Ephemeral Ditch	Not Applicable						
15.24	S41[g]	UNT to Crooked Creek	Ephemeral	1	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Temporary Mat	Figure 34
15.62	S42	UNT to Crooked Creek	Intermittent	2	Drains to WWF	Drains to Stocked Trout Stream	0.61	February 15 – June 1	Temporary Mat	Figure 36
15.66	D21	N/A	Ephemeral Ditch	Not Applicable						
15.68	S43[g]	UNT to Crooked Creek	Intermittent	1	Drains to WWF	Drains to Stocked Trout Stream	0.47	February 15 – June 1	Dry Crossing	Figures 36.1 and 36A
16.20	S44[g]	UNT to Crooked Creek	Intermittent	2	Drains to WWF	Drains to Stocked Trout Stream	0.41	February 15 – June 1	Dry Crossing	Figures 38 and 38A
16.50	S45[g]	UNT to Crooked Creek	Intermittent	3	Drains to WWF	Drains to Stocked Trout Stream	0.59	February 15 – June 1	Dry Crossing	Figures 39 and 39A
16.54	D22	N/A	Ephemeral Ditch	Not Applicable						
16.54	S46	UNT to Crooked Creek	Intermittent	1	Drains to WWF	Drains to Stocked Trout Stream	0.57	February 15 – June 1	Temporary Mat	Figure 39

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]	Site Plan Figure Number[h]
17.04	S47	UNT to Crooked Creek	Perennial	3	Drains to WWF	Drains to Stocked Trout Stream	0.68	February 15 – June 1	Dry Crossing	Figures 41 and 41A
17.18	S48	UNT to Crooked Creek	Perennial	3	Drains to WWF	Drains to Stocked Trout Stream	0.84	February 15 – June 1	Dry Crossing	Figures 42 and 42A
17.2	S49[g]	UNT to Crooked Creek	Ephemeral	Dry	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing	Figures 42 and 42A
17.42	D24	N/A	Ephemeral Ditch	Not Applicable						
17.50	S50[g]	UNT to Crooked Creek	Intermittent	3	Drains to WWF	Drains to Stocked Trout Stream	0.41	February 15 – June 1	Dry Crossing	Figures 43 and 43A
17.50	S51[g]	UNT to Crooked Creek	Intermittent	1	Drains to WWF	Drains to Stocked Trout Stream	0.71	February 15 – June 1	Temporary Mat	Figure 43
18.32	S52	UNT to Crooked Creek	Perennial	8	WWF	Drains to Stocked Trout Stream	0.94	February 15 – June 1	Dry Crossing	Figures 44.1 and 44A
18.67	Sw11	N/A	Man-made Swale	Not Applicable						
18.85	S53	UNT to Losey Creek	Perennial	6	WWF	Drains to Stocked Trout Stream	0.72	February 15 – June 1	Dry Crossing	Figures 45 and 45A
19.15	D26	N/A	Ephemeral Ditch	Not Applicable						
19.17	S54[g]	UNT to Losey Creek	Ephemeral	1	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing	Figures 46 and 46A
Cathodic Protection Ground Bed A (YM59 3.8)	S66	UNT to North Fork of Cowanesque River	Ephemeral	1	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Temporary Matting	Figures 47 and 47.1
Access Roads										
YM59 TAR-2	S19	UNT to North Fork of Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.69	February 15 – June 1	Dry Crossing	Figures 58 and 58.1
YM59 TAR-2	S20	North Fork Cowanesque River	Perennial	6	CWF	Drains to Stocked Trout Stream	0.67	February 15 – June 1	Dry Crossing	Figures 58 and 58.1

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]	Site Plan Figure Number[h]
YM59 TAR-4	S23	UNT to North Fork of Cowanesque River	Perennial	2	CWF	Drains to Stocked Trout Stream	0.79	February 15 – June 1	Temporary Bridge/Culvert	Figure 19
YM59 TAR-4	S24	UNT to North Fork of Cowanesque River	Perennial	1	Drains to CWF	Drains to Stocked Trout Stream	0.88	February 15 – June 1	Temporary Bridge/Culvert	Figures 20 and 20.1
YM59 TAR-4	D09	UNT to North Fork of Cowanesque River	Intermittent Ditch	Not Applicable						
Cathodic Protection Ground Bed A (YM59 3.8)	S66	UNT to North Fork of Cowanesque River	Ephemeral	1	Drains to CWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Temporary Matting	Figure 47
YM59 TAR-6	S56[g]	UNT to California Brook	Intermittent	3	Drains to WWF	Drains to Stocked Trout Stream	0.41	February 15 – June 1	Existing Culvert	Figure 48
YM59 TAR-6	Sw04	N/A	Man-made swale	Not Applicable						
YM59 TAR-7	S56a[g]	UNT to California Brook	Ephemeral	1	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Existing Culvert	Figure 49
YM59 TAR-7	S57	UNT to California Brook	Intermittent	2	Drains to WWF	Drains to Stocked Trout Stream	0.61	February 15 – June 1	Existing Culvert	Figure 50
YM59 TAR-7	S58[g]	UNT to California Brook	Ephemeral	2	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Temporary Bridge/Culvert	Figure 51
YM59 TAR-7	S59[g]	UNT to California Brook	Ephemeral	1	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Temporary Bridge/Culvert	Figure 51
YM59 TAR-10	S31	UNT to Cowanesque River	Perennial	1	Drains to WWF	Drains to Stocked Trout Stream	0.76	February 15 – June 1	Existing Access Road	Figure 56
YM59 TAR-10A	S68	UNT to Cowanesque River	Perennial	2	Drains to WWF	Drains to Stocked Trout Stream	0.46	February 15 – June 1	Temporary Bridge/Culvert	Figure 52
YM59 TAR-10A	S63	UNT to Cowanesque River	Perennial	12	Drains to WWF	Drains to Stocked Trout Stream	0.48	February 15 – June 1	Temporary Bridge/Culvert	Figure 52
YM59 TAR-10A	S64	UNT to Cowanesque River	Perennial	4	Drains to WWF	Drains to Stocked Trout Stream	0.24	February 15 – June 1	Temporary Bridge/Culvert	Figure 53

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]	Site Plan Figure Number[h]
YM59 TAR-10A	S67	UNT to Cowanesque River	Perennial	6	Drains to WWF	Drains to Stocked Trout Stream	0.80	February 15 – June 1	Existing Culvert	Figure 54
YM59 PAR-7	S39[g]	UNT to Jemison Creek	Ephemeral	0.5	Drains to WWF	Drains to Stocked Trout Stream	-	February 15 – June 1	Dry Crossing	Figure 29
YM59 TAR-11	S47	UNT to Crooked Creek	Perennial	3	Drains to WWF	Drains to Stocked Trout Stream	0.68	February 15 – June 1	Dry Crossing	Figure 57
YM59 TAR-11	D33	N/A	Ephemeral Ditch	Not Applicable						
YM59 PAR-10	D17	N/A	Ephemeral Ditch	Not Applicable						
YM59 PAR-10	D18	N/A	Ephemeral Ditch	Not Applicable						
YM59 PAR-13	D25	N/A	Ephemeral Ditch	Not Applicable						
YM59 PAR-13	Sw10	N/A	Man-made Swale	Not Applicable						
YM59 PAR-14	Sw12	N/A	Man-made Swale	Not Applicable						
YM59 PAR-14	Sw13	N/A	Man-made Swale	Not Applicable						

Notes:
a Prefix to resource identification numbers: S = stream, D = ditch, Sw = swale.
b UNT = unnamed tributary
c CWF = Coldwater Fishes, WWF = Warmwater Fishes
d Level 2 Rapid Assessment Condition Index data forms are provided in the Aquatic Resource Report included as Appendix A of this Environmental Assessment. Note, the assessment was not conducted for ephemeral streams or ditches/swales.
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.

N/A = Not Applicable – resource is a ditch.
PAFBC = PA Fish and Boat Commission
Source for state stream designations: PADEP 2024b, PAFBC 2024.

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

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	
Mainline Pipeline (YM59 Pipeline)												
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	0.170	-	-	0.014	-	-	PIPE; TMPWI; WTDIM
9.85	Tioga	W59	41.927243	-77.516526	Westfield	0.049	-	-	0.005	-	-	PIPE; TMPWI; WTDIM
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	-	-	0.003	-	-	TMPWI
17.16	Tioga	W40	41.903838	-77.399772	Chatham	-	-	0.081	-	-	0.079	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	
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
Tioga County Totals[d]						**3.331**	**0.315**	**0.462**	**0.465**	**0.044**	**0.269**	

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	

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 25 feet of the 75-foot-wide limit of disturbance through regulated resources.

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 reflect the 50 feet of the 75-foot-wide limit of disturbance through regulated resources that will be permanent pipeline easement. Wetlands will be restored post construction and permanent impacts will be the result of operations and maintenance within the 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 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-2 Impacted Area of Waterbodies Crossed by the Tioga Pathway Project, Tioga 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]
								Temporary (Acres)[c]	Permanent (Acres)[d]	Temporary (Acres)[c]	Permanent (Acres)[d]	
Pipelines and Associated Aboveground Facilities												
Mainline Pipeline (YM59 Pipeline)												
2.88	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	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	S20	North Fork Cowanesque River	Perennial	25	Brookfield	41.958269	-77.604058	0.045	0.006			PIPE; BRDG: FLACT
3.42	Sw02	N/A	Man-made Swale	Not Applicable								
3.68	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	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	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	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	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	Sw05	N/A	Man-made Swale	Not Applicable								
5.34	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	Sw04	N/A	Man-made Swale	Not Applicable								
5.74	S26	California Brook	Perennial	15	Brookfield	41.967168	-77.561839	0.027	0.004	0.327	0.047	PIPE; BRDG: FLACT
5.78	D10	N/A	Ephemeral Ditch	Not Applicable								
6.40	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	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	S62	UNT to Cowanesque River	Perennial	10	Westfield	41.931261	-77.518355	0.018	0.003	0.251	0.030	PIPE; BRDG: FLACT

Milepost	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	S65[g]	UNT to Cowanesque River	Ephemeral	1[f]	Westfield	41.927439	-77.516767	0.003	0.000	0.602	0.005	BRDG: FLACT
9.91	D32	N/A	Ephemeral Ditch	Not Applicable								
9.98	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	S32	Cowanesque River	Perennial	59	Westfield	41.924832	-77.515902	0.132	0.003			PIPE; BRDG: FLACT
10.10	S33	UNT to Cowanesque River	Ephemeral	12[f]	Westfield	41.923983	-77.515853	0.025	0.001			BRDG: FLACT
12.05	S39[g]	UNT to Jemison Creek	Ephemeral	5	Westfield	41.914324	-77.483963	0.012	0.002	0.250	0.032	PIPE; BRDG: FLACT
12.14	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	S38	UNT to Jemison Creek	Intermittent	2[f]	Westfield	41.913881	-77.482558	0.000	0.000			BRDG: FLACT
12.24	S36	Jemison Creek	Perennial	20	Westfield	41.913886	-77.481102	0.034	0.006	0.471	0.053	PIPE; BRDG: FLACT
13.90	Sw07	N/A	Man-made Swale	Not Applicable								
13.98	Sw08	N/A	Man-made Swale	Not Applicable								
14.05	Sw09	N/A	Man-made Swale	Not Applicable								
14.16	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	D15	N/A	Ephemeral Ditch	Not Applicable								
14.80	D16	N/A	Ephemeral Ditch	Not Applicable								
14.81	S40	Boatman Brook	Perennial	12	Deerfield	41.914391	-77.43785	0.020	0.003	0.186	0.026	PIPE; BRDG: FLACT
14.96	D18	N/A	Ephemeral Ditch	Not Applicable								
(Along PAR-10 near MP 14.97)	D17	N/A	Ephemeral Ditch	Not Applicable								
15.02	D19	N/A	Ephemeral Ditch	Not Applicable								
15.24	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	S42	UNT to Crooked Creek	Intermittent	2[f]	Deerfield	41.911082	-77.424149	0.000	0.000	0.019	0.000	FLACT
15.66	D21	N/A	Ephemeral Ditch	Not Applicable								
15.68	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	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	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	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	D22	N/A	Ephemeral Ditch	Not Applicable								
16.54	S46	UNT to Crooked Creek	Intermittent	6[f]	Chatham	41.906927	-77.408497	0.000	0.000	0.065	0.000	FLACT
17.04	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	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	S49[g]	UNT to Crooked Creek	Ephemeral	4	Chatham	41.903844	-77.399343	0.008	0.001			PIPE; BRDG: FLACT
17.42	D24	N/A	Ephemeral Ditch	Not Applicable								
17.50	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	S51[g]	UNT to Crooked Creek	Intermittent	1[f]	Chatham	41.90182	-77.394441	0.001	0.000			BRDG: FLACT
18.32	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	Sw11	N/A	Man-made Swale	Not Applicable								
18.85	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	D26	N/A	Ephemeral Ditch	Not Applicable								
19.17	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)	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												
YM59 TAR-2	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	S20	North Fork Cowanesque River	Perennial	25[f]	Brookfield	41.958269	-77.604058	0.000	0.000			FLACT

Milepost	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	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	S24	UNT to North Fork of Cowanesque River	Perennial	8	Brookfield	41.962671	-77.583404	0.006	0.000			Existing culvert; FLACT
YM59 TAR-4	D09	UNT to North Fork of Cowanesque River	Intermittent Ditch	Not Applicable								
YM59 TAR-3	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	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	Sw04	N/A	Man-made swale	Not Applicable								
YM59 TAR-7	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	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	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	S59[g]	UNT to California Brook	Ephemeral	2	Brookfield	41.970209	-77.559236	0.012	0.000			CULV/BRDG; FLACT
YM59 TAR-10	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	S32	Cowanesque River	Perennial	59[f]	Westfield	41.925362	-77.515292	0.000	0.000			FLACT
YM59 TAR-10A	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	S63	UNT to Cowanesque River	Perennial	50	Westfield	41.924073	-77.521176	0.041	0.000			CULV/BRDG; FLACT
YM59 TAR-10A	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	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	S39[g]	UNT to Jemison Creek	Perennial	5	Westfield	41.910238	-77.447776	0.000	0.000	0.035	0.000	Existing culvert/road; FLACT
YM59 TAR-15	S47	UNT to Crooked Creek	Perennial	15[f]	Chatham	41.903658	-77.402068	0.014	0.000	0.207	0.000	FLACT

Milepost	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-11	D33	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-10	D17	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-10	D18	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-13	D25	N/A	Ephemeral Ditch	Not Applicable								
YM59 PAR-13	Sw10	N/A	Man-made Swale	Not Applicable								
YM59 PAR-14	Sw12	N/A	Man-made Swale	Not Applicable								
YM59 PAR-14	Sw13	N/A	Man-made Swale	Not Applicable								
							Tioga County Totals[h]	**0.742**	**0.070**	**12.757**	**1.001**	

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.

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.

Milepost	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]	
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.												

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	0.170	-	-	0.014	-	-	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	-	-	0.003	-	-	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]	4.537	1.863	0.846	0.465	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 25 feet of the 75-foot-wide limit of disturbance through regulated resources.

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 reflect the 50 feet of the 75-foot-wide limit of disturbance through regulated resources that will be permanent pipeline easement. Wetlands will be restored post construction and permanent impacts will be the result of operations and maintenance within the 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 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.