PENNEAST PIPELINE PROJECT

Draft Environmental Impact Statement

Volume III – Appendices G - K

PennEast Pipeline Company, LLC

Docket No. CP15-558-000

FERC\EIS: 0271D

Federal Energy Regulatory Commission
Office of Energy Projects
Washington, DC 20426

Cooperating Agencies

US Army Corps of Engineers

United States Department of Agriculture
Natural Resources Conservation Service

July 2016

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
Pennsylvania Mainline								
	0.0	0.0	Pennsylvania	Luzerne	Dallas Twp	Appalachian Plateaus	Bedrock	R
	0.0	0.4	Pennsylvania	Luzerne	Dallas Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	0.4	0.6	Pennsylvania	Luzerne	Dallas Twp	Appalachian Plateaus	Bedrock	R
	0.6	0.7	Pennsylvania	Luzerne	Dallas Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	0.7	1.2	Pennsylvania	Luzerne	Dallas Twp	Appalachian Plateaus	Bedrock	R
	1.2	1.3	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Bedrock	R
	1.3	1.6	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	1.6	2.0	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Bedrock	R
	2.0	2.1	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	2.1	2.5	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Bedrock	R
	2.5	2.6	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	2.6	3.1	Pennsylvania	Luzerne	Kingston Twp	Appalachian Plateaus	Bedrock	R
	3.1	3.1	Pennsylvania	Luzerne	Kingston Twp	Valley and Ridge	Alluvium	Qa
	3.1	4.2	Pennsylvania	Luzerne	Kingston Twp	Valley and Ridge	Bedrock	R
	4.2	4.2	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Bedrock	R
	4.2	4.3	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Wisconsinan till	Qwt
	4.3	4.4	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Bedrock	R
	4.4	4.6	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Wisconsinan till	Qwt
	4.6	4.6	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Bedrock	R
	4.6	5.1	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Wisconsinan till	Qwt
	5.1	5.3	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Strip mine	Sm
	5.3	5.3	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Granite or granitic gneiss pit	gp
	5.3	5.4	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Wisconsinan ice-contact stratified drift	Qwic
	5.4	5.5	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Wisconsinan outwash	Qwo
	5.5	5.6	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Coal dump	cd

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	5.6	6.0	Pennsylvania	Luzerne	West Wyoming Boro	Valley and Ridge	Granite or granitic gneiss pit	gp
	6.0	6.0	Pennsylvania	Luzerne	Wyoming Boro	Valley and Ridge	Granite or granitic gneiss pit	gp
	6.0	6.3	Pennsylvania	Luzerne	Wyoming Boro	Valley and Ridge	Alluvium	Qa
	6.3	6.5	Pennsylvania	Luzerne	Wyoming Boro	Valley and Ridge	Wisconsinan outwash	Qwo
	6.5	6.9	Pennsylvania	Luzerne	Wyoming Boro	Valley and Ridge	Alluvium	Qa
	6.9	7.0	Pennsylvania	Luzerne	Wyoming Boro	Valley and Ridge	Slate or shale bedrock	sr
	7.0	7.1	Pennsylvania	Luzerne	Wyoming Boro	Valley and Ridge	Alluvium	Qa
	7.1	7.1	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Alluvium	Qa
	7.1	7.2	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Slate or shale bedrock	sr
	7.2	7.2	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Alluvium	Qa
	7.2	7.3	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Wisconsinan outwash	Qwo
	7.3	7.3	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Strip mine	Sm
	7.3	7.4	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Coal dump	cd
	7.4	7.4	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Strip mine	Sm
	7.4	7.4	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Coal dump	cd
	7.4	7.5	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Strip mine	Sm
	7.5	7.7	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Coal dump	cd
	7.7	7.7	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Strip mine	Sm
	7.7	7.8	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Wisconsinan ice-contact stratified drift	Qwic
	7.8	7.8	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Strip mine	Sm
	7.8	8.0	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Bedrock	R
	8.0	8.1	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	8.1	8.5	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Wisconsinan till	Qwt
	8.5	9.0	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	9.0	9.1	Pennsylvania	Luzerne	Jenkins Twp	Valley and Ridge	Strip mine	Sm
	9.1	9.1	Pennsylvania	Luzerne	Laflin Boro	Valley and Ridge	Strip mine	Sm

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	9.1	9.1	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	9.1	9.5	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	9.5	9.6	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	9.6	9.8	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	9.8	9.9	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Coal dump	cd
	9.9	10.0	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Rock pit	Rp
	10.0	10.0	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	10.0	10.1	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Coal dump	cd
	10.1	10.2	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Wisconsinan till	Qwt
	10.2	10.4	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	10.4	10.7	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Wisconsinan till	Qwt
	10.7	10.8	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	10.8	10.9	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	10.9	10.9	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	10.9	10.9	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Alluvium	Qa
	10.9	10.9	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	10.9	11.0	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	11.0	11.0	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Wisconsinan ice-contact stratified drift	Qwic
	11.0	11.2	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Strip mine	Sm
	11.2	11.4	Pennsylvania	Luzerne	Plains Twp	Valley and Ridge	Bedrock	R
	11.4	12.0	Pennsylvania	Luzerne	Plains Twp	Appalachian Plateaus	Bedrock	R
	12.0	12.3	Pennsylvania	Luzerne	Plains Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	12.3	12.3	Pennsylvania	Luzerne	Plains Twp	Appalachian Plateaus	Bedrock	R
	12.3	12.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	12.4	12.5	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	12.5	12.7	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	12.7	12.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	12.8	13.0	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan ice-contact stratified drift	Qwic
	13.0	13.0	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Fill	f
	13.0	13.0	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Granite or granitic gneiss pit	gp
	13.0	13.3	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	13.3	13.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	13.8	13.9	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	13.9	14.0	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	14.0	14.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	14.4	15.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	15.4	15.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	15.4	15.6	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	15.6	15.7	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	15.7	15.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan ice-contact stratified drift	Qwic
	15.8	15.9	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Alluvium	Qa
	15.9	16.0	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	16.0	16.1	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan ice-contact stratified drift	Qwic
	16.1	16.1	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	16.1	16.1	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Alluvium	Qa
	16.1	16.2	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	16.2	16.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	16.4	16.5	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	16.5	16.7	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	16.7	16.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	16.8	16.9	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	16.9	17.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	17.4	17.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	17.4	17.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wetland	Qw
	17.4	17.5	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	17.5	17.6	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	17.6	17.6	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	17.6	17.9	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	17.9	18.1	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	18.1	19.3	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	19.3	19.5	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Alluvium	Qa
	19.5	19.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	19.8	19.9	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	19.9	20.1	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	20.1	20.1	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	20.1	20.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	20.8	21.2	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	21.2	21.3	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	21.3	21.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	21.4	21.5	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	21.5	22.3	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	22.3	22.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	22.4	22.4	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Alluvium	Qa
	22.4	22.7	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Bedrock	R
	22.7	22.7	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	22.7	22.8	Pennsylvania	Luzerne	Bear Creek Twp	Appalachian Plateaus	Alluvium	Qa
	22.8	22.8	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Alluvium	Qa
	22.8	23.2	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	22.8	23.2	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	23.2	23.7	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	23.7	24.7	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Woodfordian ground moraine	Qwgm
	24.7	24.8	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	24.8	26.1	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Woodfordian ground moraine	Qwgm
	26.1	27.4	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Woodfordian end moraine	Qwem
	27.4	27.6	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	27.6	28.1	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	28.1	29.1	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	29.1	29.3	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	29.3	29.4	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Peat	Qp
	29.4	29.6	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	29.6	29.7	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	29.7	30.1	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	30.1	30.2	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	30.2	30.9	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	30.9	32.7	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	32.7	32.8	Pennsylvania	Carbon	Kidder Twp	Appalachian Plateaus	Bedrock	R
	32.8	32.9	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Bedrock	R
	32.9	33.0	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Wisconsinan till	Qwt
	33.0	33.3	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Illinoian till	Qit
	33.3	33.4	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Illinoian lag	Qil
	33.4	33.6	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Red and gray sandstone and shale bedrock	rgr
	33.6	33.8	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	33.8	34.0	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Red and gray sandstone and shale bedrock	rgr

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	34.0	34.2	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	34.2	34.4	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Alluvium	Qa
	34.4	34.5	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	34.5	34.6	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Illinoian lag	Qil
	34.6	34.7	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	34.7	37.1	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Illinoian till	Qit
	37.1	37.6	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Illinoian lag	Qil
	37.6	38.0	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Shale or sandstone bedrock	br
	38.0	38.1	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder alluvium	Qba
	38.1	38.7	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	38.7	38.9	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Shale or sandstone bedrock	br
	38.9	38.9	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Shale or sandstone bedrock	br
	38.9	38.9	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	38.9	39.3	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	39.3	39.3	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder colluvium	Qbc
	39.3	39.7	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	39.7	40.0	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Boulder alluvium	Qba
	40.0	40.0	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Red and gray sandstone and shale bedrock	rgr
	40.0	40.2	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Stony colluvium derived from red sandstone and conglomerate	Qsrc
	40.2	40.4	Pennsylvania	Carbon	Penn Forest Twp	Appalachian Plateaus	Pre-Illinoian fill	Qpit
	40.4	40.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian fill	Qpit
	40.8	40.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Boulder alluvium	Qba
	40.8	40.9	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Stony colluvium derived from red sandstone and conglomerate	Qsrc
	40.9	40.9	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Boulder alluvium	Qba

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	40.9	40.9	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Stony colluvium derived from red sandstone and conglomerate	Qsrc
	40.9	41.1	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Boulder alluvium	Qba
	41.1	41.3	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian fill	Qpit
	41.3	41.3	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Boulder alluvium	Qba
	41.3	41.4	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian fill	Qpit
	41.4	41.5	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian lag	Qpil
	41.5	41.6	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	41.6	41.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Red shale and sandstone bedrock	rr
	41.8	41.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian lag	Qpil
	41.8	41.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian fill	Qpit
	41.8	41.9	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian lag	Qpil
	41.9	42.1	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Red shale and sandstone bedrock	rr
	42.1	42.4	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	42.4	42.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Pre-Illinoian lag	Qpil
	42.8	43.3	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Slate or shale bedrock	sr
	43.3	43.3	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Alluvium	Qa
	43.3	43.3	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Illinoian lag	Qil
	43.3	43.6	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Illinoian outwash	Qio
	43.6	43.7	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Illinoian lag	Qil
	43.7	43.8	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Open water	ow
	43.8	44.0	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Slate or shale bedrock	sr
	44.0	44.0	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Alluvium	Qa
	44.0	44.2	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Slate or shale bedrock	sr
	44.2	44.4	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Gray sandstone and shale bedrock	gr
	44.4	44.5	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Red shale and sandstone bedrock	rr
	44.4	44.5	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Red shale and sandstone bedrock	rr

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	44.5	44.5	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Red shale and sandstone bedrock	rr
	44.5	44.5	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Alluvium	Qa
	44.5	44.6	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Alluvium	Qa
	44.6	44.7	Pennsylvania	Carbon	Towamensing Twp	Appalachian Plateaus	Red shale and sandstone bedrock	rr
	44.7	44.8	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Red shale and sandstone bedrock	rr
	44.8	44.8	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Alluvium	Qa
	44.8	45.1	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Red shale and sandstone bedrock	rr
	45.1	45.3	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	45.3	45.3	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Alluvium	Qa
	45.3	46.5	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Red and gray sandstone and shale bedrock	rgr
	46.5	46.7	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	46.7	46.8	Pennsylvania	Carbon	Towamensing Twp	Valley and Ridge	Red shale and sandstone bedrock	rr
	46.8	47.3	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Red shale and sandstone bedrock	rr
	47.3	47.6	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	47.6	47.9	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Slate or shale bedrock	sr
	47.9	47.9	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Alluvium	Qa
	47.9	48.1	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Boulder colluvium	Qbc
	48.1	48.2	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	48.2	48.3	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Boulder colluvium	Qbc
	48.3	48.5	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	48.5	48.6	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Boulder colluvium	Qbc
	48.6	48.6	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Stony colluvium derived from gray sandstone	Qssc
	48.6	48.7	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	48.7	48.7	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Pre-Illinoian outwash	Qpio
	48.7	48.9	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Wisconsinan outwash	Qwo

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	48.9	49.0	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Alluvium	Qa
	49.0	49.5	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Wisconsinan outwash	Qwo
	49.5	49.7	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Stony colluvium derived from red sandstone and conglomerate	Qsrc
	49.7	49.8	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Boulder colluvium	Qbc
	49.8	49.8	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Stony colluvium derived from red sandstone and conglomerate	Qsrc
	49.8	50.0	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Red shale and sandstone bedrock	rr
	50.0	50.0	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	50.0	50.1	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Boulder colluvium	Qbc
	50.1	50.5	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	50.5	50.6	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Boulder colluvium	Qbc
	50.6	50.9	Pennsylvania	Carbon	Lower Towamensing Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	50.9	51.3	Pennsylvania	Northampton	Lehigh Twp	Valley and Ridge	Gray sandstone and shale bedrock	gr
	51.3	52.4	Pennsylvania	Northampton	Lehigh Twp	Valley and Ridge	Boulder colluvium	Qbc
	52.4	52.7	Pennsylvania	Northampton	Lehigh Twp	Valley and Ridge	Stony colluvium derived from gray sandstone	Qssc
	52.7	53.2	Pennsylvania	Northampton	Lehigh Twp	Valley and Ridge	Boulder colluvium	Qbc
	53.2	53.3	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Boulder colluvium	Qbc
	53.3	53.5	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Stony colluvium derived from gray sandstone	Qssc
	53.5	53.6	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	53.6	53.7	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	53.7	54.1	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	54.1	54.2	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	54.2	55.6	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	55.6	55.7	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Alluvium	Qa
	55.7	55.8	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian fill	Qpit

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	55.8	55.8	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	55.8	56.4	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	56.4	56.5	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	56.5	57.7	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	57.7	57.9	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	57.9	58.2	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	58.2	58.2	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	58.2	58.7	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	58.7	58.8	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	58.8	59.0	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	59.0	59.0	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	59.0	60.0	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	60.0	60.0	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Alluvium	Qa
	60.0	60.1	Pennsylvania	Northampton	Moore Twp	Valley and Ridge	Slate or shale bedrock	sr
	60.1	60.3	Pennsylvania	Northampton	East Allen Twp	Valley and Ridge	Slate or shale bedrock	sr
	60.3	60.4	Pennsylvania	Northampton	East Allen Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	60.4	60.4	Pennsylvania	Northampton	East Allen Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	60.4	60.4	Pennsylvania	Northampton	East Allen Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	60.4	60.9	Pennsylvania	Northampton	East Allen Twp	Valley and Ridge	Slate or shale bedrock	sr
	60.9	61.2	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Slate or shale bedrock	sr
	61.2	61.2	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	61.2	61.2	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Alluvium	Qa
	61.2	61.2	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	61.2	61.8	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	61.8	61.9	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Limestone bedrock	lr
	61.9	62.0	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Urban Land	u

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	62.0	62.0	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	62.0	62.1	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Urban Land	u
	62.1	62.2	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	62.2	62.4	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	62.4	62.4	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	62.4	62.5	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Urban Land	u
	62.5	62.5	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Fill	f
	62.5	63.3	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	63.3	63.3	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Alluvium	Qa
	63.3	63.5	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	63.5	63.7	Pennsylvania	Northampton	Upper Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	63.7	64.4	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	64.4	64.7	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	64.7	65.1	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	65.1	65.2	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	65.2	65.6	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	65.6	65.7	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian fill	Qpit
	65.7	65.7	Pennsylvania	Northampton	Lower Nazareth Twp	Valley and Ridge	Pre-Illinoian lag	Qpl
	65.7	65.8	Pennsylvania	Northampton	Lower Nazareth Twp	New England	Pre-Illinoian lag	Qpl
	65.8	65.9	Pennsylvania	Northampton	Lower Nazareth Twp	New England	Pre-Illinoian fill	Qpit
	65.9	66.5	Pennsylvania	Northampton	Lower Nazareth Twp	New England	Pre-Illinoian lag	Qpl
	66.5	66.7	Pennsylvania	Northampton	Lower Nazareth Twp	New England	Pre-Illinoian fill	Qpit
	66.7	66.8	Pennsylvania	Northampton	Lower Nazareth Twp	New England	Pre-Illinoian lag	Qpl
	66.8	67.3	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian lag	Qpl
	67.3	67.6	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian fill	Qpit
	67.6	67.9	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian lag	Qpl

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	67.9	67.9	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian fill	Qpit
	67.9	68.4	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian lag	Qpl
	68.4	68.4	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian fill	Qpit
	68.4	70.1	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian lag	Qpl
	70.1	70.2	Pennsylvania	Northampton	Bethlehem Twp	New England	Limestone bedrock	lr
	70.2	70.6	Pennsylvania	Northampton	Bethlehem Twp	New England	Pre-Illinoian lag	Qpl
	70.6	70.6	Pennsylvania	Northampton	Bethlehem Twp	New England	Limestone bedrock	lr
	70.6	70.7	Pennsylvania	Northampton	Bethlehem Twp	New England	Urban Land	u
	70.7	70.7	Pennsylvania	Northampton	Easton City	New England	Urban Land	u
	70.7	70.8	Pennsylvania	Northampton	Easton City	New England	Coaly alluvium	ca
	70.8	70.8	Pennsylvania	Northampton	Lower Saucon Twp	New England	Coaly alluvium	ca
	70.8	71.1	Pennsylvania	Northampton	Lower Saucon Twp	New England	Limestone bedrock	lr
	71.1	71.1	Pennsylvania	Northampton	Lower Saucon Twp	New England	Limestone and sandstone colluvium	Qlsc
	71.1	71.3	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	71.3	71.4	Pennsylvania	Northampton	Lower Saucon Twp	New England	Pre-Illinoian lag	Qpl
	71.4	71.4	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	71.4	71.5	Pennsylvania	Northampton	Lower Saucon Twp	New England	Sandstone bedrock	ss
	71.5	71.8	Pennsylvania	Northampton	Lower Saucon Twp	New England	Granitic gneiss bedrock	g
	71.8	71.8	Pennsylvania	Northampton	Lower Saucon Twp	New England	Hornblende gneiss bedrock	hg
	71.8	72.0	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from hornblende gneiss	Qhgc
	72.0	72.1	Pennsylvania	Northampton	Lower Saucon Twp	New England	Hornblende gneiss bedrock	hg
	72.1	72.1	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from hornblende gneiss	Qhgc
	72.1	72.7	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from hornblende gneiss	Qhgc

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	72.7	72.9	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from granitic gneiss	Qggc
	72.9	73.3	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from hornblende gneiss	Qhgc
	73.3	73.6	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from granitic gneiss	Qggc
	73.6	73.8	Pennsylvania	Northampton	Williams Twp	New England	Granitic gneiss bedrock	g
	73.8	73.9	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from granitic gneiss	Qggc
	73.9	74.2	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	74.2	74.4	Pennsylvania	Northampton	Williams Twp	New England	Pre-Illinoian lag	Qpl
	74.4	74.4	Pennsylvania	Northampton	Williams Twp	New England	Alluvium	Qa
	74.4	74.7	Pennsylvania	Northampton	Williams Twp	New England	Pre-Illinoian fill	Qpit
	74.7	74.9	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	74.9	75.1	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from hornblende gneiss	Qhgc
	75.1	75.2	Pennsylvania	Northampton	Williams Twp	New England	Hornblende gneiss bedrock	hg
	75.2	75.4	Pennsylvania	Northampton	Williams Twp	New England	Granitic gneiss bedrock	g
	75.4	75.5	Pennsylvania	Northampton	Williams Twp	New England	Colluvium derived from granitic gneiss	Qggc
	75.5	75.6	Pennsylvania	Northampton	Williams Twp	New England	Granitic gneiss bedrock	g
	75.6	75.7	Pennsylvania	Bucks	Durham Twp	New England	Granitic gneiss bedrock	g
	75.7	75.7	Pennsylvania	Bucks	Durham Twp	New England	Colluvium derived from granitic gneiss	Qggc
	75.7	76.0	Pennsylvania	Bucks	Durham Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	76.0	76.1	Pennsylvania	Bucks	Durham Twp	New England	Pre-Illinoian lag	Qpl
	76.1	76.2	Pennsylvania	Bucks	Durham Twp	New England	Limestone and/or iron ore dump	ld
	76.2	76.2	Pennsylvania	Bucks	Durham Twp	New England	Pre-Illinoian lag	Qpl
	76.2	76.4	Pennsylvania	Bucks	Durham Twp	New England	Pre-Illinoian fill	Qpit
	76.4	76.5	Pennsylvania	Bucks	Riegelsville Boro	New England	Pre-Illinoian fill	Qpit

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	76.5	76.5	Pennsylvania	Bucks	Riegelsville Boro	New England	Limestone and/or iron ore pit	lp
	76.5	76.6	Pennsylvania	Bucks	Riegelsville Boro	New England	Pre-Illinoian lag	Qpl
	76.6	76.8	Pennsylvania	Bucks	Durham Twp	New England	Pre-Illinoian lag	Qpl
	76.8	77.1	Pennsylvania	Bucks	Durham Twp	New England	Pre-Illinoian outwash	Qpio
	77.1	77.2	Pennsylvania	Bucks	Durham Twp	New England	Wisconsinan outwash	Qwo
	77.2	77.2	Pennsylvania	Bucks	Durham Twp	New England	Sand and gravel pit	sgp
	77.2	77.4	Pennsylvania	Bucks	Durham Twp	New England	Alluvium	Qa
Hellertown 24-inch Lateral								
	0.0	0.0	Pennsylvania	Northampton	Lower Saucon Twp	New England	Pre-Illinoian lag	Qpl
	0.0	0.2	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	0.2	0.3	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from granitic gneiss	Qggc
	0.3	0.7	Pennsylvania	Northampton	Lower Saucon Twp	New England	Granitic gneiss bedrock	g
	0.7	1.2	Pennsylvania	Northampton	Lower Saucon Twp	New England	Hornblende gneiss bedrock	hg
	1.2	1.3	Pennsylvania	Northampton	Lower Saucon Twp	New England	Granitic gneiss bedrock	g
	1.3	1.3	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from granitic gneiss	Qggc
	1.3	1.4	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from hornblende gneiss	Qhgc
	1.4	1.4	Pennsylvania	Northampton	Lower Saucon Twp	New England	Colluvium derived from granitic gneiss and sandstone	Qgsc
	1.4	1.5	Pennsylvania	Northampton	Lower Saucon Twp	New England	Sandstone bedrock	ss
	1.5	2.0	Pennsylvania	Northampton	Lower Saucon Twp	New England	Hornblende gneiss bedrock	hg
	2.0	2.1	Pennsylvania	Northampton	Lower Saucon Twp	New England	Granitic gneiss bedrock	g
New Jersey Mainline								
	77.4	77.4	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qa
	77.4	77.4	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	77.4	77.5	New Jersey	Hunterdon	Holland Twp	New England	Weathered Gneiss	Qwg

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	77.5	77.7	New Jersey	Hunterdon	Holland Twp	New England	Late Wisconsinan Glaciofluvial Deposits	Qwf
	77.7	77.7	New Jersey	Hunterdon	Holland Twp	New England	Gneiss Colluvium	Qcg
	77.7	78.1	New Jersey	Hunterdon	Holland Twp	New England	Weathered Gneiss	Qwg
	78.1	78.2	New Jersey	Hunterdon	Holland Twp	New England	Weathered Carbonate Rock	Qwcb
	78.2	79.3	New Jersey	Hunterdon	Holland Twp	New England	Weathered Conglomerate	Qwc
	79.3	79.6	New Jersey	Hunterdon	Holland Twp	New England	Weathered Shale, Mudstone, and Sandstone	Qws
	79.6	79.8	New Jersey	Hunterdon	Holland Twp	New England	Eolian Deposits	Qe
	79.8	79.8	New Jersey	Hunterdon	Holland Twp	New England	Late Wisconsinan Glaciofluvial Deposits	Qwf
	79.8	79.8	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	79.8	80.0	New Jersey	Hunterdon	Holland Twp	New England	Late Wisconsinan Glaciofluvial Deposits	Qwf
	80.0	80.0	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	80.0	80.2	New Jersey	Hunterdon	Holland Twp	New England	Late Wisconsinan Glaciofluvial Deposits	Qwf
	80.2	80.2	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	80.2	80.3	New Jersey	Hunterdon	Holland Twp	New England	Late Wisconsinan Glaciofluvial Deposits	Qwf
	80.3	80.4	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	80.4	80.5	New Jersey	Hunterdon	Holland Twp	New England	Postglacial Stream Terrace Deposits	Qst
	80.5	80.6	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	80.6	81.8	New Jersey	Hunterdon	Holland Twp	New England	Weathered Conglomerate	Qwc
	81.8	81.8	New Jersey	Hunterdon	Holland Twp	New England	Weathered Shale, Mudstone, and Sandstone	Qws
	81.8	81.8	New Jersey	Hunterdon	Holland Twp	New England	Alluvium and Colluvium	Qcal
	81.8	82.4	New Jersey	Hunterdon	Holland Twp	New England	Weathered Shale, Mudstone, and Sandstone	Qws
	82.4	82.6	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal

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Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	82.6	82.9	New Jersey	Hunterdon	Holland Twp	New England	Weathered Shale, Mudstone, and Sandstone	Qws
	82.9	82.9	New Jersey	Hunterdon	Holland Twp	New England	Alluvium	Qal
	82.9	83.1	New Jersey	Hunterdon	Holland Twp	New England	Weathered Shale, Mudstone, and Sandstone	Qws
	83.1	83.3	New Jersey	Hunterdon	Holland Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	83.3	83.4	New Jersey	Hunterdon	Holland Twp	Piedmont	Alluvium	Qal
	83.4	84.0	New Jersey	Hunterdon	Holland Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	84.0	84.0	New Jersey	Hunterdon	Holland Twp	Piedmont	Alluvium	Qal
	84.0	85.5	New Jersey	Hunterdon	Holland Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	85.5	85.5	New Jersey	Hunterdon	Holland Twp	Piedmont	Alluvium	Qal
	85.5	85.6	New Jersey	Hunterdon	Holland Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	85.6	85.7	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	85.7	85.8	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Alluvium	Qal
	85.8	86.4	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	86.4	86.5	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Alluvium	Qal
	86.5	86.5	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Alluvial Fan Deposits	Qaf
	86.5	87.6	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	87.6	87.6	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Alluvium	Qal
	87.6	88.5	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	88.5	88.5	New Jersey	Hunterdon	Alexandria Twp	Piedmont	Alluvium	Qal
	88.5	88.5	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	88.5	89.2	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	89.2	89.2	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium and Colluvium	Qcal
	89.2	90.4	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	90.4	90.4	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal
	90.4	90.8	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	90.8	90.9	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal
	90.9	92.4	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	92.4	92.6	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal
	92.6	93.1	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	93.1	93.2	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal
	93.2	93.4	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	93.4	93.5	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal
	93.5	93.9	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	93.9	93.9	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium and Colluvium	Qcal
	93.9	94.1	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	94.1	94.2	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Alluvium	Qal
	94.2	95.1	New Jersey	Hunterdon	Kingwood Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	95.1	95.7	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	95.7	95.8	New Jersey	Hunterdon	Delaware Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs
	95.8	95.8	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium	Qal

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	95.8	97.0	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	97.0	97.0	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium and Colluvium	Qcal
	97.0	97.4	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	97.4	97.5	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium	Qal
	97.5	97.7	New Jersey	Hunterdon	Delaware Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs
	97.7	98.0	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	98.0	98.1	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium	Qal
	98.1	99.2	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	99.2	99.2	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium	Qal
	99.2	100.0	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Diabase	Qwd
	100.0	100.3	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	100.3	100.3	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium and Colluvium	Qcal
	100.3	100.5	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	100.5	100.6	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium and Colluvium	Qcal
	100.6	100.7	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	100.7	100.8	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium and Colluvium	Qcal
	100.8	100.8	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium	Qal
	100.8	101.0	New Jersey	Hunterdon	Delaware Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	101.0	101.1	New Jersey	Hunterdon	Delaware Twp	Piedmont	Alluvium	Qal
	101.1	101.1	New Jersey	Hunterdon	Delaware Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	101.1	101.2	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs
	101.2	102.7	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	102.7	102.7	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Alluvium	Qal
	102.7	102.8	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs
	102.8	103.3	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	103.3	103.6	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Diabase	Qwd
	103.6	103.6	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Alluvium	Qal
	103.6	103.7	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Diabase Colluvium	Qcd
	103.7	103.7	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Alluvium	Qal
	103.7	104.0	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Diabase Colluvium	Qcd
	104.0	104.4	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Diabase	Qwd
	104.4	104.5	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	104.5	104.7	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs
	104.7	105.2	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	105.2	105.4	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	105.4	105.4	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium and Colluvium	Qcal
	105.4	105.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	105.6	105.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	105.6	106.1	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	106.1	106.1	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	106.1	106.2	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	106.2	106.3	New Jersey	Mercer	Hopewell Twp	Piedmont	Postglacial Stream Terrace Deposits	Qst
	106.3	106.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	106.5	106.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Shale, Mudstone, and Sandstone Colluvium	Qcs
	106.5	106.7	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	106.7	106.7	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	106.7	107.1	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	107.1	107.2	New Jersey	Mercer	Hopewell Twp	Piedmont	Diabase Colluvium	Qcd
	107.2	107.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Diabase	Qwd
	107.6	107.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium and Colluvium	Qcal
	107.6	108.2	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Diabase	Qwd
	108.2	108.3	New Jersey	Mercer	Hopewell Twp	Piedmont	Diabase Colluvium	Qcd
	108.3	108.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Diabase	Qwd
	108.5	108.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Diabase Colluvium	Qcd
	108.5	108.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium and Colluvium	Qcal
	108.5	108.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Diabase Colluvium	Qcd
	108.6	108.8	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Diabase	Qwd
	108.8	109.1	New Jersey	Mercer	Hopewell Twp	Piedmont	Diabase Colluvium	Qcd
	109.1	109.1	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	109.1	109.1	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	109.1	109.4	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	109.4	109.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium and Colluvium	Qcal

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	109.5	109.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	109.5	109.5	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium and Colluvium	Qcal
	109.5	109.9	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	109.9	109.9	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	109.9	110.9	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	110.9	111.0	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	111.0	111.2	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	111.2	111.2	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	111.2	111.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	111.6	111.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	111.6	112.4	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	112.4	112.9	New Jersey	Mercer	Hopewell Twp	Piedmont	Eolian Deposits	Qe
	112.9	113.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	113.6	113.6	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	113.6	114.4	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	114.4	114.4	New Jersey	Mercer	Hopewell Twp	Piedmont	Alluvium	Qal
	114.4	115.0	New Jersey	Mercer	Hopewell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
Gilbert 24-inch Lateral								
	0.0	0	New Jersey	Hunterdon	Holland Twp	New England	Weathered Shale, Mudstone, and Sandstone	Qws
Lambertville 24-inch Lateral								

Table G-1

Surficial Geological Conditions Associated with the Project

Facility	Begin MP	End MP	State	County	Municipality	Physiographic Province a/	Surficial Geology	Geology Code
	0.0	0.8	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws
	0.8	0.9	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Alluvium and Colluvium	Qcal
	0.9	1.4	New Jersey	Hunterdon	West Amwell Twp	Piedmont	Weathered Shale, Mudstone, and Sandstone	Qws

Notes:
a/ Physiographic Province derived from USGS shapefile - http://water.usgs.gov/GIS/dsdl/physio_shp.zip

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
Pennyslvania Mainline							
	0.0	1.3	Luzerne	Dallas Township	Appalachian Plateaus	In Dallas Township, the Project is underlain by the Devonian-aged Catskill Formation, a grayish-red sandstone, siltstone, shale, and mudstone; locally conglomeratic. The topography is flat to undulating hills.	Dck
	1.3	4.2	Luzerne	Kingston Township	Appalachian Plateaus and Ridge & Valley	In Kingston Township, the Project is underlain by the Devonian-aged Catskill Formation, a grayish-red sandstone, siltstone, shale, and mudstone; locally conglomeratic. The Mississippian-aged Pocono Formation, a light-gray to buff or light-olive-gray, medium-grained, cross-bedded sandstone, and minor siltstone. The topography is undulating hills with some steep valleys.	Dck
	4.2	6.0	Luzerne	West Wyoming Borough	Ridge & Valley	In West Wyoming Borough, the Project is underlain by the Devonian-aged Catskill Formation, a grayish-red sandstone, siltstone, shale, and mudstone; locally conglomeratic; the Mississippian-aged Pocono Formation, a light-gray to buff or light-olive-gray, medium-grained, cross-bedded sandstone and minor siltstone; Mauch Chunk Formation, a grayish-red shale, siltstone, sandstone, and some conglomerate; the Pennsylvanian-aged Llewellyn Formation, a gray, fine- to coarse-grained sandstone, siltstone, shale, conglomerate, and numerous anthracite coals in repetitive sequences; and Pottsville Formation, a gray sandstone and conglomerate; also contains thin beds of shale, claystone, limestone, and coal. The topography is a steep valley to flat.	Dck Mp Mmc Pl Pp
	6.0	7.1	Luzerne	Wyoming Borough	Ridge & Valley	In Wyoming Borough, the Project area is underlain by the Pennsylvanian-age Llewellyn Formation, a gray, fine- to coarse-grained sandstone, siltstone, shale, conglomerate, and numerous anthracite coals in repetitive sequences. The topography is relatively flat.	Pl
	7.1	9.1	Luzerne	Jenkins Township	Ridge & Valley	In Jenkins Township, the Project area is underlain by the Pennsylvanian-age Llewellyn Formation, a gray, fine- to coarse-grained sandstone, siltstone, shale, conglomerate, and numerous anthracite coals in repetitive sequences. The topography is relatively flat to undulating.	Pl
	8.1	12.6	Luzerne	Plains Township	Ridge & Valley	In Plains Township, the Project area is underlain by the Pennsylvanian-age Llewellyn Formation, a gray, fine- to coarse-grained sandstone, siltstone, shale, conglomerate, and numerous anthracite coals in repetitive sequences; Pottsville Formation, a gray sandstone and conglomerate; also contains thin beds of shale, claystone, limestone, and coal; and the Mississippian-aged Mauch Chunk Formation, a grayish-red shale, siltstone, sandstone, and some conglomerate. The topography is relatively flat to undulating.	Pl Pp Mmc
	9.1	9.1	Luzerne	Laflin Borough	Ridge & Valley	In Laflin Borough, the Project area is underlain by the Pennsylvanian age Llewellyn Formation, a gray, find- to coarse-grained sandstone, siltstone, shale, conglomerate, and numerous anthracite coals in repetitive sequences. The topography is relatively flat to undulating.	Pl

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	12.6	23.0	Luzerne	Bear Creek Township	Ridge & Valley and Appalachian Plateaus	In Bear Creek Township, the Project area is underlain by the Mississippian-aged Mauch Chunk Formation, a grayish-red shale, siltstone, sandstone, and some conglomerate; Pocono Formation, a light-gray to buff or light-olive-gray, medium-grained, cross-bedded sandstone and minor siltstone; Spechty Kopf Formation, a light- to olive-gray, fine- to medium- grained, cross-bedded sandstone with minor pebbly mudstone, and laminite arranged in crude fining-upward cycles in some places; and the Devonian-aged Duncannon member of the Catskill Formation, a grayish-red sandstone, siltstone, and mudstone in fining-upward cycles; conglomerate occurs at base of some cycles. The topography is undulating hills. Elevation ranges from 1200' to 2010' above sea level.	Mmc Mp MDsk Dcd
	23.0	33.1	Carbon	Kidder Township	Appalachian Plateaus	In Kidder Township, the Project area is underlain by the Mississippian-aged Spechty Kopf Formation, a light- to olive-gray, fine- to medium- grained, cross-bedded sandstone with minor pebbly mudstone, and laminite arranged in crude fining-upward cycles in some places; and the Devonian-aged Duncannon member of the Catskill Formation, a grayish-red sandstone, siltstone, and mudstone in fining-upward cycles; conglomerate occurs at base of some cycles. The topography is gently undulating.	MDsk Dcd
	33.1	40.6	Carbon	Penn Forest Township	Appalachian Plateaus and Ridge & Valley	In Penn Forest Township, the Project area is underlain by the Devonian-aged Duncannon member of the Catskill Formation, a grayish-red sandstone, siltstone, and mudstone in fining-upward cycles, with conglomerate occurring at the base of some cycles; the Mississippian-aged Spechty Kopf Formation, a light- to olive-gray, fine- to medium- grained, cross-bedded sandstone with minor pebbly mudstone, and laminite, arranged in crude fining-upward cycles in some places; and by the following members of the Devonian-aged Catskill Formation: Poplar Gap member, gray and light-olive-gray sandstone, conglomerate, and siltstone containing intermittent red beds; Packerton member, a greenish-gray to gray sandstone and some siltstone; some laterally persistent conglomerate beds in lower part; Long Run member, a gray and grayish-red sandstone and grayish-red siltstone and mudstone in fining-upward cycles. The topography is gently undulating to undulating.	Dcd MDsk Dcpg Dcp Dclr

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	40.6	47.1	Carbon	Towamensing Township	Ridge and Valley	In Towamensing Township, the Project area is underlain by the following members of the Devonian-aged Catskill Formation: Long Run member, a gray and grayish-red sandstone and grayish-red siltstone and mudstone in fining-upward cycles; Beaverdam Run Member, an alternating olive-gray siltstone and sandstone; with marine fossils; Walcksville member, a greenish-gray sandstone and red siltstone and mudstone in fining-upward cycles; and the Towamensing member, consisting of sandstone, siltstone, and shale. Other Devonian-aged Formations underlying the Project area are the Trimmers Rock Formation, olive-gray siltstone and shale, characterized by graded bedding with marine fossils and some very fine grained sandstone; Mahantango Formation, a gray, brown, and olive shale and siltstone, with marine fossils; and the Marcellus Formation, a black shale with sparse marine fauna and siderite concretions. The topography is gently undulating.	Dclr Dcbr Dcw Dct Dtr Dmh Dm
	47.1	51.1	Carbon	Lower Towamensing Township	Ridge & Valley	In Lower Towamensing Township, the Project area is underlain by the following members of the Devonian-aged Catskill Formation: Walcksville member, a greenish-gray sandstone and red siltstone and mudstone in fining-upward cycles; and the Towamensing member, consisting of sandstone, siltstone, and shale. Other Devonian-aged Formations underlying the Project area are the Trimmers Rock Formation, an olive-gray siltstone and shale, characterized by graded bedding, marine fossils, and some very fine grained sandstone; Mahantango Formation, a gray, brown, and olive shale and siltstone, with marine fossils; the Marcellus Formation, a black shale with sparse marine fauna and siderite concretions; the Buttermilk Falls Limestone, a gray fossiliferous limestone and black chert; and the Ridgeley Formation, a white siliceous sandstone. Silurian-aged Formations underlying the Project area are the Decker Formation, a gray calcareous sandstone having lenses of calcareous conglomerate, siltstone, and shale, and lenses of limestone and dolomite; the Bloomsburg Formation, a grayish-red siltstone, shale, and sandstone arranged in fining-upward cycles; and the Shawangunk Formation, a light to dark-gray, fine to very coarse grained sandstone and conglomerate, containing a few shale interbeds. The topography is gently undulating to undulating.	Dcw Dct Dtr Dmh Dm Dbe Drc Sdp Sb Ss
	51.1	53.5	Northampton	Lehigh Township	Ridge & Valley	In Lehigh Township, the Project area is underlain by the Silurian-aged Shawangunk Formation, a light to dark-gray, fine to very coarse grained sandstone and conglomerate, containing a few shale interbeds, and the Ordovician-aged Martinsburg Formation, a gray to dark gray, and infrequently tan and purple shale and slate with graywacke and shale, which consists of abundant impure sandstone (graywacke) interbeds. The topography is gently undulating.	Ss Om

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	53.5	60.3	Northampton	Moore Township	Ridge & Valley	In Moore Township, the Project area is underlain by the Ordovician-aged Martinsburg Formation, a gray to dark gray, and infrequently tan and purple shale and slate with graywacke and shale, which consists of abundant impure sandstone (graywacke) interbeds. The topography is gently undulating.	Om Omgs
	60.3	61.2	Northampton	East Allen Township	Ridge & Valley	In East Allen Township, the Project area is underlain by the Ordovician-aged Martinsburg Formation, a gray to dark gray, and infrequently tan and purple shale and slate. The topography is gently undulating.	Om
	61.2	63.9	Northampton	Upper Nazareth Township	Ridge & Valley	In Upper Nazareth Township, the Project area is underlain by Ordovician-aged Jacksonburg Formation, a dark-gray shaly limestone (cement rock) having slaty cleavage; basal medium- to thick-bedded limestone (cement limestone); the Martinsburg Formation, a gray to dark gray, and infrequently tan and purple shale and slate; and the Epler Formation, a very finely crystalline, light-gray limestone interbedded with gray dolomite; coarsely crystalline limestone lenses present. The topography is flat to gently undulating.	Ojk Om Oe
	63.9	67.1	Northampton	Lower Nazareth Township	Ridge & Valley	In Lower Nazareth Township, the Project area is underlain by Ordovician-aged Epler Formation, a very finely crystalline, light-gray limestone interbedded with gray dolomite; coarsely crystalline limestone lenses present; the Rickenbach Formation, a gray, very finely to coarsely crystalline, laminated dolomite; dark-gray chert in irregular beds, stringers, and nodules; bands of quartz sand grains in lower half; and the Cambrian-aged Allentown Formation, a dark-gray, thick-bedded dolomite and impure limestone; dark-gray chert stringers and nodules; laminated, oolitic and stromatolitic, some orange-brown-weathering calcareous siltstone at base. The topography is flat to gently undulating.	Oe Ori Cal
	67.1	70.9	Northampton	Bethlehem Township	Ridge & Valley	In Bethlehem Township, the Project area is underlain by Cambrian-aged Allentown Formation, a dark-gray, thick-bedded dolomite and impure limestone; dark-gray chert stringers and nodules; laminated, oolitic and stromatolitic, some orange-brown-weathering calcareous siltstone at base and the Leithsville Formation, a gray, crystalline dolomite, light-olive-gray in places, massive bedded; oolitic; pink to gray, mottled chert and dark-gray chert, thin shale and dolomitic shale interbeds, scattered sand grains; upper part is very shaly. The topography is flat to gently undulating.	Cal Clv
	70.9	71.1	Northampton	City of Easton	Ridge & Valley	In the City of Easton, the Project area is underlain by Cambrian-aged Leithsville Formation, a gray, crystalline dolomite, light-olive-gray in places, massive bedded; oolitic; pink to gray, mottled chert and dark-gray chert, thin shale and dolomitic shale interbeds, scattered sand grains; upper part is very shaly. The topography is gently undulating.	Clv

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	71.1	72.4	Northampton	Lower Saucon Township	Ridge & Valley and New England	In the Ridge and Valley Physiographic portion of Lower Saucon Township, the Project area is underlain by the Cambrian-aged Leithsville Formation, a gray, crystalline dolomite, light-olive-gray in places, massive bedded; oolitic; pink to gray, mottled chert and dark-gray chert, thin shale and dolomitic shale interbeds, scattered sand grains; upper part is very shaly; and Hardyston Formation, a light-gray, fine- to medium-grained quartzite, and feldspathic sandstone; color ranges from nearly white to dark gray; massive bedded; quartz-pebble conglomerate occurs at base. In the New England Physiographic portion of Lower Saucon Township, the dark, medium-grained Precambrian hornblende gneiss; and light, medium-grained felsic to mafic gneiss underlie the Project area. The topography is upslope. The elevation ranges from 200' to 600' above sea level.	Clv Cha hg gn
	72.4	75.9	Northampton	Williams Township	Ridge & Valley and New England	In the Ridge and Valley Physiographic portion of Williams Township, the Project area is underlain by the Cambrian-aged Leithsville Formation, a gray, crystalline dolomite, light-olive-gray in places, massive bedded; oolitic; pink to gray, mottled chert and dark-gray chert, thin shale and dolomitic shale interbeds, scattered sand grains; upper part is very shaly; Allentown Formation, a dark-gray, thick-bedded dolomite and impure limestone; dark-gray chert stringers and nodules; laminated, oolitic and stromatolitic, some orange-brown-weathering calcareous siltstone at base; and Hardyston Formation, a light-gray, fine- to medium-grained quartzite, and feldspathic sandstone; color ranges from nearly white to dark gray; massive bedded; quartz-pebble conglomerate occurs at base. In the New England Physiographic portion of Williams Township, the dark, medium-grained Precambrian hornblende gneiss; and light, medium-grained felsic to mafic gneiss underlie the Project area. The topography is upslope.	Clv Cal Cha hg gn

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	75.9	77.7	Bucks	Durham Township	Ridge & Valley and New England	In the Ridge and Valley Physiographic portion of Durham Township, the Project area is underlain by the Cambrian-aged Hardyston Formation, a light-gray, fine- to medium-grained quartzite, and feldspathic sandstone; color ranges from nearly white to dark gray; massive bedded; quartz-pebble conglomerate occurs at base; Leithsville Formation, a gray, crystalline dolomite, light-olive-gray in places, massive bedded; oolitic; pink to gray, mottled chert and dark-gray chert, thin shale and dolomitic shale interbeds, scattered sand grains; upper part is very shaly; and Allentown Formation, a dark-gray, thick-bedded dolomite and impure limestone; dark-gray chert stringers and nodules; laminated, oolitic and stromatolitic, some orange-brown-weathering calcareous siltstone at base. In the New England Physiographic portion of Durham Township, the Project area is underlain by the Trenton Gravel, a gray or pale-reddish-brown, very gravelly sand interstratified with crossbedded sand and clay-silt beds; includes areas of Holocene alluvium and swamp deposits and dark, medium-grained Precambrian hornblende gneiss; and light, medium-grained felsic to mafic gneiss also underlie the Project area.The topography is relatively flat.	Cha Clv Cal Qt hg gn
	76.7	76.9	Bucks	Riegelsville Borough	Ridge and Valley	In Riegelsville Borough, the Project area is underlain by the Cambrian-aged Allentown Formation, a dark-gray, thick-bedded dolomite and impure limestone; dark-gray chert stringers and nodules; laminated, oolitic and stromatolitic, some orange-brown-weathering calcareous siltstone at base. The topography is flat	Cal
Hellertown Lateral							
	0.0	2.1	Northampton	Lower Saucon Township	New England and Ridge and Valley	In the New England Physiographic portion of the Hellertown Lateral Project area, the bedrock is composed of the dark, medium-grained Precambrian hornblende gneiss; and the light, medium-grained felsic to mafic gneiss. This rock comprises most of the higher elevations due to its resistance to weathering. In the Ridge and Valley Physiographic portion of the Hellertown Lateral Project area, the bedrock is composed of the Cambrian-aged Leithsville Formation, a gray, fine- to medium-grained, thin- to medium-bedded dolomite; and Hardyston Formation, a light-gray, fine- to medium-grained quartzite, and feldspathic sandstone; quartz-pebble conglomerate occurring at base. Elevation ranges from approximately 350' to 700' above sea level.	Hg gn Clv Cha

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
New Jersey Mainline							
	77.7	85.4	Hunterdon	Holland Township	Highlands and Piedmont	In Holland Township, the Project area is underlain by the Cambrian-aged Hardyston Formation, a light-gray, fine- to medium-grained quartzite, and feldspathic sandstone; quartz-pebble conglomerate occurring at base. Middle Proterozoic-aged Quartz-Oligoclase Gneiss Losee Metamorphic Suite, a white-weathering, light-greenish-gray, medium- to coarse-grained, moderately layered to indistinctly foliated gneiss and the Hornblende Granite - Byram Intrusive Suite, a pinkish-gray- to medium-buff-weathering, pinkish-white or light-pinkish-gray, medium- to coarse-grained, gneissoid to indistinctly foliated granite and sparse granite gneiss composed principally of microcline microperthite, quartz, oligoclase, and hornblende. The Project area is also underlain by the Cambrian-aged Leithsville Formation gray, a fine- to medium-grained, thin- to medium-bedded dolomite; the Jurassic–Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; the Passaic Formation quartzite-clast conglomerate facies, a brownish-red pebble conglomerate, medium- to coarse-grained, feldspathic sandstone and micaceous siltstone; the Passaic Formation conglomerate and sandstone facies, a brownish-red pebble conglomerate, medium- to coarse-grained, feldspathic sandstone and micaceous siltstone; and the Triassic-aged Passaic Formation gray bed, an Upper Triassic gray lake deposits that consists of gray to black silty mudstone, gray and greenish- to purplish-gray argillaceous siltstone, black shale, and medium- to dark-gray, argillaceous, fine-grained sandstone, this unit is abundant in the lower half of the Passaic Formation. The topography is gently rolling hills.	Ch Ylo Ybh Cl JTrp JTrpcq JTrpsc Trpg
	85.4	87.7	Hunterdon	Alexandria Township	Piedmont	In Alexandria Township, the Project area is underlain by the Jurassic – Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; and the Triassic-aged Passaic Formation gray bed, an Upper Triassic gray lake deposits that consists of gray to black silty mudstone, gray and greenish- to purplish-gray argillaceous siltstone, black shale, and medium- to dark-gray, argillaceous, fine-grained sandstone, this unit is abundant in the lower half of the Passaic Formation. The topography is gently undulating.	JTrp Trpg

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	87.7	94.4	Hunterdon	Kingwood Township	Piedmont	In Kingwood Township, the Project area is underlain by the Jurassic – Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; the Triassic-aged Passaic Formation gray bed, an Upper Triassic gray lake deposits that consists of gray to black silty mudstone, gray and greenish- to purplish-gray argillaceous siltstone, black shale, and medium- to dark-gray, argillaceous, fine-grained sandstone, this unit is abundant in the lower half of the Passaic Formation; the Triassic-aged Lockatong Formation, cyclic lacustrine sequences of silty, dolomitic or argillite; laminated mudstone; and the Lockatong Formation red bed, cyclic lacustrine sequences of silty, dolomitic or analcime-bearing argillite; laminated mudstone; silty to calcareous, argillaceous very fine grained sandstone and pyritic siltstone; and minor silty limestone, mostly light- to dark-gray, greenish gray, and black. The topography is gently undulating to flat.	JTrp Trpg Trl Trlr
	94.4	100.4	Hunterdon	Delaware Township	Piedmont	In Delaware Township, the Project area is underlain by the Jurassic-aged Diabase, which are sheet-like intrusions of medium- to fine-grained diabase and diabase dikes whose main components are labradorite and pyroxene; the Jurassic – Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; the Triassic-aged Lockatong Formation, which consists of cyclic lacustrine sequences of silty, dolomitic or argillite; laminated mudstone; and the Triassic-aged Stockton Formation major rock type medium- to coarse-grained, light-gray, light-grayish-brown, or yellowish- to pinkish-gray arkosic sandstone and medium- to fine-grained, violet-gray to reddish-brown arkosic sandstone with minor argillaceous siltstone. The topography is flat to gently undulating.	Jd JTrp Trl Trs
	100.4	104.4	Hunterdon	West Amwell Township	Piedmont	In this portion of West Amwell Township, the Project area is underlain by theJurassic Diabase, consisting predominantly of sheet-like intrusions of medium- to fine-grained diabase and diabase dikes, main components are labradorite and pyroxene; the Jurassic – Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; the Triassic-aged Lockatong Formation - predominantly cyclic lacustrine sequences of silty, dolomitic or argillite; laminated mudstone; and the Triassic-aged Passaic Formation gray bed, an Upper Triassic gray lake deposits that consists of gray to black silty mudstone, gray and greenish- to purplish-gray argillaceous siltstone, black shale, and medium- to dark-gray, argillaceous, fine-grained sandstone, this unit is abundant in the lower half of the Passaic Formation. The topography is gently undulating to flat.	Jd JTrp Trl Trpg

Table G-2

Geological Conditions Associated with the Project

Facility	Begin MP a/	End MP a/	County	Municipality	Physiographic Province	Geological Formation and Topography	Geologic Formation Symbol
	104.4	114.0	Mercer	Hopewell Township	Piedmont	In Hopewell Township, the Project area is underlain by the Jurassic-aged Diabase, which are sheet-like intrusions of medium- to fine-grained diabase and diabase dikes, whose main components are labradorite and pyroxene; the Jurassic – Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; and the Triassic-aged Passaic Formation gray bed, an Upper Triassic gray lake deposits that consists of gray to black silty mudstone, gray and greenish- to purplish-gray argillaceous siltstone, black shale, and medium- to dark-gray, argillaceous, fine-grained sandstone, this unit is abundant in the lower half of the Passaic Formation. The topography is gently undulating to flat.	Jd JTrp Trpg
Gilbert 12-inch Lateral							
	0.0	0.1	Hunterdon	Holland Township	Piedmont	In Holland Township, the Project area is underlain by the Jurassic-Triassic-aged Passaic Formation conglomerate and sandstone facies, a brownish-red pebble conglomerate, medium- to coarse-grained, feldspathic sandstone and micaceous siltstone. The topography is gently rolling hills.	JTrpsc
Lambertville 36-inch Lateral							
	0.0	1.4	Hunterdon	West Amwell Township	Piedmont	In West Amwell Township, the Project area is underlain by the Jurassic – Triassic-aged Passaic Formation, a reddish-brown to brownish-purple and grayish-red siltstone and shale; and the Triassic-aged Passaic Formation gray bed, an Upper Triassic gray lake deposits that consists of gray to black silty mudstone, gray and greenish- to purplish-gray argillaceous siltstone, black shale, and medium- to dark-gray, argillaceous, fine-grained sandstone, this unit is abundant in the lower half of the Passaic Formation. The topography is flat to gently undulating.	JTrp Trpg

Notes:
a/ Overlapping MPs are due to crossing in and out of municipality borders.

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
HELLERTOWN LATERAL	24	0.17	0.28	0.00	Yes	gn	Felsic to mafic gneiss	Felsic gneiss	Intermediate gneiss	Mafic gneiss
LAMBERTVILLE LATERAL	36	0.00	0.02	3.74	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
LAMBERTVILLE LATERAL	36	0.02	1.43	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	0.30	0.62	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	0.45	0.51	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	0.71	1.27	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	1.66	1.72	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	1.72	2.05	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	2.14	2.54	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	2.57	3.08	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	3.13	4.24	2.49	Yes	Dck	Catskill Formation	Sandstone	Siltstone	Shale; conglomerate; mudstone
MAINLINE	36	4.38	4.40	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	4.52	4.56	2.49	Yes	Mmc	Mauch Chunk Formation	Shale	Siltstone	Sandstone; conglomerate; limestone
MAINLINE	36	4.60	4.62	1.41	Yes	Mmc	Mauch Chunk Formation	Shale	Siltstone	Sandstone; conglomerate; limestone
MAINLINE	36	5.08	5.11	3.35	Yes	Pp	Pottsville Formation	Sandstone	Conglomerate	Shale; siltstone; claystone; limestone; coal
MAINLINE	36	5.11	5.13	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	5.19	5.35	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	5.42	5.42	0.07	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	5.45	5.52	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	5.68	6.01	0.07	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	7.32	7.73	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	7.84	8.05	2.49	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	8.06	8.15	2.49	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	8.51	9.32	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	9.41	9.67	1.41	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	9.67	9.70	3.35	Yes	Pp	Pottsville Formation	Sandstone	Conglomerate	Shale; siltstone; claystone; limestone; coal
MAINLINE	36	9.70	9.72	2.49	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	9.72	9.87	1.41	Yes	Pp	Pottsville Formation	Sandstone	Conglomerate	Shale; siltstone; claystone; limestone; coal
MAINLINE	36	9.87	10.19	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	10.27	10.42	3.35	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	10.77	10.92	2.66	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	10.95	10.98	2.49	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	10.99	11.44	2.49	Yes	Pl	Llewellyn Formation	Sandstone	Siltstone	Shale; conglomerate; coal
MAINLINE	36	11.44	11.94	1.41	Yes	Pp	Pottsville Formation	Sandstone	Conglomerate	Shale; siltstone; claystone; limestone; coal
MAINLINE	36	11.94	12.07	1.41	Yes	Mmc	Mauch Chunk Formation	Shale	Siltstone	Sandstone; conglomerate; limestone
MAINLINE	36	12.32	12.45	2.49	Yes	Mmc	Mauch Chunk Formation	Shale	Siltstone	Sandstone; conglomerate; limestone
MAINLINE	36	12.51	12.76	2.49	Yes	Mmc	Mauch Chunk Formation	Shale	Siltstone	Sandstone; conglomerate; limestone
MAINLINE	36	12.76	12.77	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	13.06	13.09	0.07	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	13.09	13.34	0.07	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	14.12	14.18	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	14.18	14.39	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	14.39	14.41	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	15.40	15.43	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	15.70	15.77	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	16.07	16.11	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	16.16	16.21	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	16.41	16.52	1.41	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	17.00	17.03	1.41	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	17.03	17.06	1.41	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	17.10	17.16	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	17.21	17.45	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	17.52	17.62	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	17.62	17.63	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	17.68	17.94	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	18.00	18.03	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	18.09	18.11	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	19.54	19.56	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	19.56	19.57	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	19.78	19.88	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	19.95	20.11	1.41	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	20.15	20.46	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	20.52	20.85	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	21.17	21.25	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	22.32	22.37	2.49	Yes	Mp	Pocono Formation	Sandstone	Siltstone	Conglomerate
MAINLINE	36	22.37	22.41	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	22.51	22.71	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	22.83	22.92	2.10	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	22.92	23.06	2.10	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	23.14	23.27	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	23.27	23.44	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	23.44	23.50	2.49	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	23.50	23.75	2.49	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	24.28	24.31	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	24.86	24.91	2.66	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	25.28	25.44	2.66	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	29.01	29.14	2.66	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	30.65	30.91	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	30.95	31.83	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	31.86	32.01	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	32.14	32.41	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	32.80	32.82	3.35	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	32.87	32.91	3.35	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	33.53	33.66	2.66	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	33.66	33.80	2.66	Yes	MDsk	Spechty Kopf Formation	Sandstone	Siltstone	Polymictic diamictite; mudstone; laminite; shale; conglomerate
MAINLINE	36	34.02	34.11	2.66	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	35.78	35.85	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	36.32	36.55	4.82	Yes	Dcd	Duncannon Member of Catskill Formation	Sandstone	Siltstone	Mudstone; conglomerate
MAINLINE	36	37.36	37.70	4.82	Yes	Dcpg	Poplar Gap Member of Catskill Formation	Sandstone	Conglomerate	Siltstone
MAINLINE	36	37.70	37.83	4.82	Yes	Dcp	Packerton Member of Catskill Formation	Sandstone	Conglomerate	Siltstone
MAINLINE	36	37.83	38.07	3.35	Yes	Dclr	Long Run Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	38.78	39.26	3.35	Yes	Dcp	Packerton Member of Catskill Formation	Sandstone	Conglomerate	Siltstone
MAINLINE	36	39.36	39.96	2.66	Yes	Dcp	Packerton Member of Catskill Formation	Sandstone	Conglomerate	Siltstone
MAINLINE	36	39.96	40.07	2.10	Yes	Dclr	Long Run Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	41.33	41.35	2.66	Yes	Dclr	Long Run Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	41.35	41.35	2.66	Yes	Dcbr	Beaverdam Run Member of Catskill Formation	Siltstone	Sandstone	Shale

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	41.39	41.44	3.35	Yes	Dcbr	Beaverdam Run Member of Catskill Formation	Siltstone	Sandstone	Shale
MAINLINE	36	41.49	41.64	3.35	Yes	Dcbr	Beaverdam Run Member of Catskill Formation	Siltstone	Sandstone	Shale
MAINLINE	36	41.64	41.81	3.35	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	41.85	41.98	3.35	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	41.98	42.27	3.35	Yes	Dct	Towamensing Member of Catskill Formation	Sandstone	Siltstone	Shale
MAINLINE	36	42.27	42.50	4.82	Yes	Dtr	Trimmers Rock Formation	Siltstone	Shale	Sandstone; black shale
MAINLINE	36	42.50	42.61	1.25	Yes	Dmh	Mahantango Formation	Shale	Siltstone	Argillaceous limestone; sandstone
MAINLINE	36	42.79	43.09	1.25	Yes	Dmh	Mahantango Formation	Shale	Siltstone	Argillaceous limestone; sandstone
MAINLINE	36	43.74	43.74	1.25	Yes	Dmh	Mahantango Formation	Shale	Siltstone	Argillaceous limestone; sandstone
MAINLINE	36	43.82	44.17	1.25	Yes	Dmh	Mahantango Formation	Shale	Siltstone	Argillaceous limestone; sandstone
MAINLINE	36	44.17	44.34	1.25	Yes	Dtr	Trimmers Rock Formation	Siltstone	Shale	Sandstone; black shale
MAINLINE	36	44.34	44.56	1.25	Yes	Dct	Towamensing Member of Catskill Formation	Sandstone	Siltstone	Shale
MAINLINE	36	44.56	44.59	1.25	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	44.62	44.68	1.25	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	44.68	44.81	1.25	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	44.84	45.14	3.35	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	45.14	45.35	1.25	Yes	Dcbr	Beaverdam Run Member of Catskill Formation	Siltstone	Sandstone	Shale
MAINLINE	36	45.38	45.91	3.35	Yes	Dclr	Long Run Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	45.95	46.13	3.35	Yes	Dclr	Long Run Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	46.16	46.49	3.35	Yes	Dclr	Long Run Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	46.49	46.71	1.25	Yes	Dcbr	Beaverdam Run Member of Catskill Formation	Siltstone	Sandstone	Shale
MAINLINE	36	46.71	47.40	3.35	Yes	Dcw	Walcksville Member of Catskill Formation	Sandstone	Siltstone	Mudstone
MAINLINE	36	47.40	47.53	1.25	Yes	Dct	Towamensing Member of Catskill Formation	Sandstone	Siltstone	Shale
MAINLINE	36	47.53	47.65	1.25	Yes	Dtr	Trimmers Rock Formation	Siltstone	Shale	Sandstone; black shale
MAINLINE	36	47.65	47.88	1.25	Yes	Dmh	Mahantango Formation	Shale	Siltstone	Argillaceous limestone; sandstone
MAINLINE	36	47.94	47.99	3.35	Yes	Dmh	Mahantango Formation	Shale	Siltstone	Argillaceous limestone; sandstone
MAINLINE	36	48.22	48.35	2.49	Yes	Dbe	Buttermilk Falls Limestone through Esopus Formation, undivided	Siliceous sandstone	Limestone	Siltstone; shale; chert
MAINLINE	36	48.35	48.43	2.49	Yes	Drc	Ridgeley Formation through Coeymans Formation, undivided	Sandstone	Siltstone	Shale; limestone; chert
MAINLINE	36	48.43	48.52	2.49	Yes	Dbe	Buttermilk Falls Limestone through Esopus Formation, undivided	Siliceous sandstone	Limestone	Siltstone; shale; chert
MAINLINE	36	48.52	48.67	3.35	Yes	Drc	Ridgeley Formation through Coeymans Formation, undivided	Sandstone	Siltstone	Shale; limestone; chert

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Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	48.67	48.81	3.35	Yes	Sdp	Decker Formation through Poxono Island Formation, undivided	Calcareous sandstone	Limestone	Siltstone; shale; dolomite
MAINLINE	36	49.67	49.73	2.66	Yes	Sb	Bloomsburg Formation	Shale	Siltstone	Sandstone; mudstone
MAINLINE	36	49.84	50.10	3.35	Yes	Sb	Bloomsburg Formation	Shale	Siltstone	Sandstone; mudstone
MAINLINE	36	50.10	51.30	2.66	Yes	Ss	Shawangunk Formation	Sandstone	Conglomerate	Shale
MAINLINE	36	51.30	51.31	4.99	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	53.53	53.59	5.09	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	53.79	53.86	5.09	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	53.90	53.91	5.09	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	54.15	54.38	5.09	Yes	Omgs	Graywacke and shale of Martinsburg Formation	Graywacke	Shale	Sandstone
MAINLINE	36	54.53	55.24	4.53	Yes	Omgs	Graywacke and shale of Martinsburg Formation	Graywacke	Shale	Sandstone
MAINLINE	36	55.29	55.48	5.09	Yes	Omgs	Graywacke and shale of Martinsburg Formation	Graywacke	Shale	Sandstone
MAINLINE	36	55.49	57.52	1.51	Yes	Omgs	Graywacke and shale of Martinsburg Formation	Graywacke	Shale	Sandstone
MAINLINE	36	57.52	60.04	1.51	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	60.08	60.41	1.51	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	60.44	61.01	2.76	Yes	Om	Martinsburg Formation	Shale	Siltstone	Slate
MAINLINE	36	61.01	61.38	1.51	Yes	Ojk	Jacksonburg Formation	Shaly limestone	Limestone	(N/A)
MAINLINE	36	61.80	61.82	3.15	Yes	Ojk	Jacksonburg Formation	Shaly limestone	Limestone	(N/A)
MAINLINE	36	62.02	62.09	5.09	Yes	Ojk	Jacksonburg Formation	Shaly limestone	Limestone	(N/A)
MAINLINE	36	62.57	62.61	5.09	Yes	Ojk	Jacksonburg Formation	Shaly limestone	Limestone	(N/A)
MAINLINE	36	62.61	62.66	5.09	Yes	Oe	Epler Formation	Limestone	Dolomite	(N/A)
MAINLINE	36	63.53	63.56	5.09	Yes	Oe	Epler Formation	Limestone	Dolomite	(N/A)
MAINLINE	36	63.63	63.64	5.09	Yes	Oe	Epler Formation	Limestone	Dolomite	(N/A)
MAINLINE	36	63.71	64.40	5.09	Yes	Oe	Epler Formation	Limestone	Dolomite	(N/A)

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	64.40	64.65	5.09	Yes	Ori	Rickenbach Formation	Dolomite	Chert	(N/A)
MAINLINE	36	65.64	66.09	5.09	Yes	Oe	Epler Formation	Limestone	Dolomite	(N/A)
MAINLINE	36	66.09	66.62	5.09	Yes	Ori	Rickenbach Formation	Dolomite	Chert	(N/A)
MAINLINE	36	66.62	66.63	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	67.01	67.12	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	67.27	67.40	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	67.46	67.56	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	67.58	67.64	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	67.72	67.84	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	67.93	68.09	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	68.10	68.17	4.53	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	68.33	68.39	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	68.53	68.66	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	68.77	69.19	4.53	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	69.30	69.53	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	69.56	69.65	4.53	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	70.29	70.61	5.09	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	70.64	70.66	0.00	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	70.66	70.69	0.00	Yes	Clv	Leithsville Formation	Dolomite	Shaly dolomite	Chert; shale
MAINLINE	36	70.88	70.89	5.51	Yes	Clv	Leithsville Formation	Dolomite	Shaly dolomite	Chert; shale
MAINLINE	36	70.91	71.01	0.00	Yes	Clv	Leithsville Formation	Dolomite	Shaly dolomite	Chert; shale
MAINLINE	36	71.39	71.51	5.84	Yes	Cha	Hardyston Formation	Quartzite	Feldspathic sandstone	Quartz-pebble conglomerate
MAINLINE	36	71.51	71.79	4.53	Yes	gn	Felsic to mafic gneiss	Felsic gneiss	Intermediate gneiss	Mafic gneiss
MAINLINE	36	71.79	71.86	5.68	Yes	hg	Hornblende gneiss	Mafic gneiss	(N/A)	(N/A)
MAINLINE	36	71.96	72.04	5.68	Yes	hg	Hornblende gneiss	Mafic gneiss	(N/A)	(N/A)

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Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	72.04	72.16	5.68	Yes	gn	Felsic to mafic gneiss	Felsic gneiss	Intermediate gneiss	Mafic gneiss
MAINLINE	36	73.08	73.11	5.68	Yes	hg	Hornblende gneiss	Mafic gneiss	(N/A)	(N/A)
MAINLINE	36	73.59	73.98	5.68	Yes	hg	Hornblende gneiss	Mafic gneiss	(N/A)	(N/A)
MAINLINE	36	73.98	74.07	5.68	Yes	gn	Felsic to mafic gneiss	Felsic gneiss	Intermediate gneiss	Mafic gneiss
MAINLINE	36	75.15	75.22	5.68	Yes	Cha	Hardyston Formation	Quartzite	Feldspathic sandstone	Quartz-pebble conglomerate
MAINLINE	36	75.22	75.65	5.68	Yes	hg	Hornblende gneiss	Mafic gneiss	(N/A)	(N/A)
MAINLINE	36	75.65	75.69	5.68	Yes	gn	Felsic to mafic gneiss	Felsic gneiss	Intermediate gneiss	Mafic gneiss
MAINLINE	36	75.69	75.71	5.68	Yes	gn	Felsic to mafic gneiss	Felsic gneiss	Intermediate gneiss	Mafic gneiss
MAINLINE	36	76.18	76.24	3.15	Yes	Cal	Allentown Formation	Dolomite	Limestone	Calcareous siltstone; chert
MAINLINE	36	77.52	77.64	3.41	Yes	Ylo	Quartz-Oligoclase Gneiss	Gneiss	(N/A)	gneiss, medium- to coarse-grained
MAINLINE	36	77.72	77.75	3.41	Yes	Ylo	Quartz-Oligoclase Gneiss	Gneiss	(N/A)	gneiss, medium- to coarse-grained
MAINLINE	36	77.75	78.11	3.41	Yes	Ybh	Hornblende Granite	Gneiss	(N/A)	granite, medium- to coarse-grained
MAINLINE	36	78.11	78.25	4.17	Yes	Cl	Leithsville Formation	Dolomite	Sandstone	dolomite, dolomitic sandstone, siltstone, and shale
MAINLINE	36	78.25	79.22	4.17	Yes	JTrpcq	Passaic Formation Quatzite-clast Conglomerate facies	Sandstone	Conglomerate	quartzite conglomerate, sandstone
MAINLINE	36	79.22	79.53	2.49	Yes	JTrpsc	Passaic Formation Conglomerate and Sandstone facies	Sandstone	Conglomerate	conglomeratic sandstone
MAINLINE	12	79.34	79.39	2.49	Yes	JTrpsc	Passaic Formation Conglomerate and Sandstone facies	Sandstone	Conglomerate	conglomeratic sandstone

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Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	80.48	81.65	4.99	Yes	JTrpcq	Passaic Formation Quatzite-clast Conglomerate facies	Sandstone	Conglomerate	quartzite conglomerate, sandstone
MAINLINE	36	81.65	81.73	4.99	Yes	JTrpsc	Passaic Formation Conglomerate and Sandstone facies	Sandstone	Conglomerate	conglomeratic sandstone
MAINLINE	36	81.75	81.94	0.00	Yes	JTrpsc	Passaic Formation Conglomerate and Sandstone facies	Sandstone	Conglomerate	conglomeratic sandstone
MAINLINE	36	81.94	82.37	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	82.42	82.61	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	82.61	82.66	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	82.66	83.14	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	83.14	83.21	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	83.21	83.24	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	83.29	83.38	0.00	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	83.38	84.46	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	84.46	84.49	0.92	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	84.49	84.83	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	84.87	85.37	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	85.56	85.56	3.51	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	85.71	85.74	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	85.79	85.83	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	86.14	86.32	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	86.44	87.52	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	87.56	88.33	0.92	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	88.33	88.40	0.92	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	88.40	88.41	1.51	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	88.44	88.48	0.00	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	88.48	88.98	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	88.89	89.03	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	89.03	89.07	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	89.07	89.11	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	89.11	89.12	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	89.15	89.76	4.17	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	89.76	90.18	4.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	90.18	90.26	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	90.29	90.87	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	90.87	91.06	1.90	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	91.06	91.34	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	91.34	91.56	1.90	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	91.56	91.59	1.90	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	91.59	91.63	1.90	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	91.63	91.68	1.90	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	91.68	91.77	1.90	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	91.77	91.82	4.17	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale

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Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	91.82	92.17	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	92.17	92.26	4.17	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	92.33	92.52	1.90	Yes	Trpg	Passaic Formation Gray bed	Siltstone	Shale	sandstone, siltstone and shale
MAINLINE	36	92.52	92.95	1.90	Yes	JTrp	Passaic Formation	Sandstone	Siltstone	siltstone and shale
MAINLINE	36	93.00	93.13	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	93.26	93.39	4.00	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	93.39	93.49	4.00	Yes	Trlr	Red bed of Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone, occasionally red
MAINLINE	36	93.49	94.05	4.17	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	94.05	94.18	4.17	Yes	Trlr	Red bed of Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone, occasionally red
MAINLINE	36	94.18	94.35	4.17	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	94.35	94.46	4.17	Yes	Trlr	Red bed of Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone, occasionally red
MAINLINE	36	94.46	95.11	4.17	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	95.19	96.34	4.17	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone

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Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	96.34	97.24	4.66	Yes	Trs	Stockton Formation	Sandstone	Siltstone	sandstone, mudstone, silty mudstone, argillaceous siltstone, and shale
MAINLINE	36	97.26	97.30	4.17	Yes	Trs	Stockton Formation	Sandstone	Siltstone	sandstone, mudstone, silty mudstone, argillaceous siltstone, and shale
MAINLINE	36	97.30	97.83	4.99	Yes	Trs	Stockton Formation	Sandstone	Siltstone	sandstone, mudstone, silty mudstone, argillaceous siltstone, and shale
MAINLINE	36	97.89	99.03	1.67	Yes	Trs	Stockton Formation	Sandstone	Siltstone	sandstone, mudstone, silty mudstone, argillaceous siltstone, and shale
MAINLINE	36	99.03	99.64	3.51	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	99.64	99.77	4.66	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	99.81	99.88	4.17	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	99.88	99.94	4.17	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	99.94	100.17	4.17	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	100.20	100.33	1.51	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	100.33	100.72	0.92	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	100.75	101.04	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	101.04	101.10	4.17	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	101.10	101.23	3.74	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	101.23	101.27	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	101.27	102.23	0.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	102.23	102.28	4.17	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	102.28	102.40	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	102.46	102.51	4.66	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	102.51	102.59	4.66	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	102.59	103.06	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	103.06	103.22	4.66	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	103.33	103.41	4.17	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	103.80	104.01	4.99	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	104.11	104.22	3.74	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	104.22	104.60	2.82	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	104.60	104.85	2.49	Yes	Trl	Lockatong Formation	Dolomite	Sandstone	dolomitic or silty argillite, mudstone, sandstone, siltstone, and minor silty limestone
MAINLINE	36	104.85	104.93	3.51	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	104.93	104.99	3.51	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	104.99	105.10	2.10	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	105.10	105.13	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	105.13	105.15	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	105.32	105.35	1.18	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	105.35	105.89	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	106.17	106.44	4.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	106.86	107.00	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	107.00	107.50	3.74	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	107.80	107.56	3.74	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	108.29	108.32	4.99	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	108.36	108.61	4.99	Yes	Jd	Jurassic Diabase	Diabase	(N/A)	diabase, medium- to coarse-grained
MAINLINE	36	108.61	108.86	4.17	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	108.86	109.05	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	109.05	109.56	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	109.60	110.17	1.18	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	110.17	110.27	2.49	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	110.27	110.64	2.10	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	110.69	110.94	1.18	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	110.99	111.00	1.18	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	111.00	111.04	1.18	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	111.04	111.31	0.92	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	111.34	112.08	2.49	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	112.08	112.20	4.00	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	112.20	112.55	4.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	112.55	112.61	4.00	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	112.61	113.31	4.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale

Table G-3

Areas where Blasting May be Required

Facility	Pipe Diameter (in)	Begin MP	End MP	Depth to Bedrock (ft)	Shallow Bedrock with Potential to Require Blasting	Map Symbol	Geologic Unit Name	Primary Lithology	Secondary Lithology	Additional Description
MAINLINE	36	113.31	113.55	2.33	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	113.55	114.32	4.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale
MAINLINE	36	114.32	114.40	4.00	Yes	Trpg	Passaic Formation Gray bed	Sandstone	Siltstone	sandstone, siltstone and shale
MAINLINE	36	114.40	114.53	4.00	Yes	JTrp	Passaic Formation	Siltstone	Shale	siltstone and shale

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Table G-4

Bedrock Aquifers Crossed by the PennEast Pipeline Project in Pennsylvania

Facility / County	Aquifer Type	Begin Milepost	End Milepost
Mainline			
Luzerne	Catskill Formation	0.0	4.2
Luzerne	Pocono Formation	4.2	4.4
Luzerne	Mauch Chunk Formation	4.4	4.6
Luzerne	Pottsville Formation	4.6	5.1
Luzerne	Llewellyn Formation	5.1	9.7
Luzerne	Pottsville Formation	9.7	9.9
Luzerne	Llewellyn Formation	9.9	11.4
Luzerne	Pottsville Formation	11.4	11.9
Luzerne	Mauch Chunk Formation	11.9	13.0
Luzerne	Pocono Formation	13.0	13.4
Luzerne	Spechty Kopf Formation	13.4	14.6
Luzerne	Duncannon Member of Catskill Formation	14.6	16.9
Luzerne	Spechty Kopf Formation	16.9	17.3
Luzerne	Pocono Formation	17.3	17.9
Luzerne	Spechty Kopf Formation	17.9	18.2
Luzerne	Duncannon Member of Catskill Formation	18.2	18.4
Luzerne	Spechty Kopf Formation	18.4	19.4
Luzerne	Duncannon Member of Catskill Formation	19.4	19.8
Luzerne	Spechty Kopf Formation	19.8	19.9
Luzerne	Pocono Formation	19.9	22.6
Luzerne	Spechty Kopf Formation	22.6	23.0
Luzerne	Duncannon Member of Catskill	23.0	23.1
Carbon	Spechty Kopf Formation	23.1	23.5
Carbon	Duncannon Member of Catskill Formation	23.5	23.6
Carbon	Spechty Kopf Formation	23.6	23.8
Carbon	Duncannon Member of Catskill Formation	23.8	24.8
Carbon	Spechty Kopf Formation	24.8	27.4
Carbon	Duncannon Member of Catskill Formation	27.4	28.0
Carbon	Spechty Kopf Formation	28.0	28.7
Carbon	Duncannon Member of Catskill Formation	28.7	33.9
Carbon	Spechty Kopf Formation	33.9	34.0
Carbon	Duncannon Member of Catskill Formation	34.0	37.0
Carbon	Poplar Gap Member of Catskill Formation	37.0	37.9
Carbon	Packerton Member of Catskill Formation	37.9	38.1
Carbon	Long Run Member of Catskill Formation	38.1	39.0
Carbon	Packerton Member of Catskill Formation	39.0	40.2
Carbon	Long Run Member of Catskill Formation	40.2	41.6
Carbon	Beaverdam Run Member of Catskill Formation	41.6	41.9
Carbon	Walcksville Member of Catskill Formation	41.9	42.2
Carbon	Towamensing Member of Catskill Formation	42.2	42.5
Carbon	Trimmers Rock Formation	42.5	42.7
Carbon	Mahantango Formation	42.7	43.3
Carbon	Marcellus Formation	43.3	44.0
Carbon	Mahantango Formation	44.0	44.4
Carbon	Trimmers Rock Formation	44.4	44.5
Carbon	Towamensing Member of Catskill Formation	44.5	44.8
Carbon	Walcksville Member of Catskill Formation	44.8	45.4

Table G-4

Bedrock Aquifers Crossed by the PennEast Pipeline Project in Pennsylvania

Facility / County	Aquifer Type	Begin Milepost	End Milepost
Carbon	Beaverdam Run Member of Catskill Formation	45.4	45.6
Carbon	Long Run Member of Catskill Formation	45.6	46.7
Carbon	Beaverdam Run Member of Catskill Formation	46.7	46.9
Carbon	Walcksville Member of Catskill Formation	46.9	47.6
Carbon	Towamensing Member of Catskill Formation	47.6	47.8
Carbon	Trimmers Rock Formation	47.8	47.9
Carbon	Mahantango Formation	47.9	48.2
Carbon	Marcellus Formation	48.2	48.4
Carbon	Buttermilk Falls Limestone through Esopus Formation, undivided	48.4	48.6
Carbon	Ridgeley Formation through Coeymans Formation, undivided	48.6	48.6
Carbon	Buttermilk Falls Limestone through Esopus Formation, undivided	48.6	48.7
Carbon	Ridgeley Formation through Coeymans Formation, undivided	48.7	48.9
Carbon	Decker Formation through Poxono Island Formation, undivided	48.9	49.7
Carbon	Bloomsburg Formation	49.7	50.3
Carbon	Shawangunk Formation	50.3	51.2
Northampton	Shawangunk Formation	51.2	51.5
Northampton	Martinsburg Formation	51.5	54.2
Northampton	Graywacke and shale of Martinsburg Formation	54.2	57.7
Northampton	Martinsburg Formation	57.7	61.2
Northampton	Jacksonburg Formation	61.2	62.8
Northampton	Epler Formation	62.8	64.6
Northampton	Rickenbach Formation	64.6	65.3
Northampton	Epler Formation	65.3	66.3
Northampton	Rickenbach Formation	66.3	66.8
Northampton	Allentown Formation	66.8	70.9
Northampton	Leithsville Formation	70.9	71.6
Northampton	Hardyston Formation	71.6	71.7
Northampton	Felsic to mafic gneiss	71.7	72.0
Northampton	Hornblende gneiss	72.0	72.2
Northampton	Felsic to mafic gneiss	72.2	72.8
Northampton	Hornblende gneiss	72.8	73.0
Northampton	Felsic to mafic gneiss	73.0	73.1
Northampton	Hornblende gneiss	73.1	74.2
Northampton	Felsic to mafic gneiss	74.2	74.3
Northampton	Leithsville Formation	74.3	74.4
Northampton	Allentown Formation	74.4	74.8
Northampton	Leithsville Formation	74.8	75.3
Northampton	Hardyston Formation	75.3	75.5
Northampton	Hornblende gneiss	75.5	75.9
Northampton/Bucks	Felsic to mafic gneiss	75.9	75.9
Bucks	Hornblende gneiss	75.9	76.0
Bucks	Hardyston Formation	76.0	76.1
Bucks	Leithsville Formation	76.1	76.2
Bucks	Allentown Formation	76.2	77.0
Bucks	Leithsville Formation	77.0	77.4
Hellertown Lateral - Pennsylvania			
Northampton	Hardyston Formation	0.0	0.2
Northampton	Felsic to mafic gneiss	0.2	0.5

Table G-4

Bedrock Aquifers Crossed by the PennEast Pipeline Project in Pennsylvania

Facility / County	Aquifer Type	Begin Milepost	End Milepost
Northampton	Hornblende gneiss	0.5	1.2
Northampton	Felsic to mafic gneiss	1.2	1.3
Northampton	Hardyston Formation	1.3	1.7
Northampton	Hornblende gneiss	1.7	2.0
Northampton	Felsic to mafic gneiss	2.0	2.1
Northampton	Leithsville Formation	2.1	2.1 (End)
Kidder Compressor Station – Pennsylvania			
Carbon	Spechty Kopf Formation	26.6	26.8

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Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
PennEast Mainline – Upper Susquehanna River Basin b/																		
0.6	Luzerne	41.34652	-75.935288	Trout Brook	092414_GO_1001_P_IM	Int.	RPW	P	CWF, MF	III	-	2,080	5	0.01	0.006	6/1-9/30	Bore	000-03-01-002
1.4	Luzerne	41.34146	-75.92179	UNT to Trout Brook	PA-NHD-002	Int.	RPW	P	CWF, MF	III	-	346	13	0.023	0.015	6/1-9/30	Dry Crossing	000-03-01-003
2.1	Luzerne	41.3377	-75.910537	UNT to Abrahams Creek	S-SUR-003	Minor	RPW	P	CWF, MF	-	-	<100	4	0.008	0.005	6/1-9/30	Dry Crossing	000-03-01-005
2.6	Luzerne	41.33198	-75.904848	UNT to Abrahams Creek	011815_JC_1000_I_MI	Minor	RPW	I	CWF, MF	-	-	<100	7	0.014	0.008	6/1-9/30	Dry Crossing	000-03-01-006
3.1	Luzerne	41.32584	-75.899492	UNT to Toby Creek	011815_JC_1001_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	8	0.046	0.031	6/1-9/30	Dry Crossing	000-03-01-007
3.1	Luzerne	41.32563	-75.899281	UNT to Toby Creek	011815_JC_1002_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	5	0.031	0.022	6/1-9/30	Dry Crossing	000-03-01-007
3.5	Luzerne	41.32272	-75.892899	UNT to Abrahams Creek	S-SUR-005	Minor	RPW	P	CWF, MF	-	-	<100	6	0.01	0.007	6/1-9/30	Dry Crossing	000-03-01-008
4.3	Luzerne	41.32102	-75.87941	UNT to Abrahams Creek	111814_JC_1002_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	3	0.004	0.003	6/1-9/30	Dry Crossing	000-03-01-009
4.6	Luzerne	41.31748	-75.875136	UNT to Abrahams Creek	S-SUR-008	Minor	RPW	P	CWF, MF	III	-	<100	3	0.01	0.009	6/1-9/30	Dry Crossing	000-03-01-010

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
5	Luzerne	41.31371	-75.869712	UNT to Abrahams Creek	093014_DY_1004_E_IM	Int.	NRPW	E	CWF, MF	III	-	<100	15	0.041	0.027	6/1-9/30	Dry Crossing	000-03-01-011
5.9	Luzerne	41.3078	-75.854154	UNT to Abrahams Creek	092314_GO_1001_I_MI	Minor	RPW	I	CWF, MF	-	-	1,350	2	0.028	0.02	6/1 - 9/30	Bore	000-03-01-012
6	Luzerne	41.30721	-75.852573	UNT to Abrahams Creek	092414_GO_1002_D_MI	Minor	-	Ditch	CWF, MF	-	-	7,360	27	0.046	0.031	6/1 - 9/30	Dry Crossing	000-03-01-013
6.3	Luzerne	41.30521	-75.849768	UNT to Susquehanna River	092414_GO_1003_P_IM	Int.	RPW	P	CWF, MF	-	-	<100	24	0.032	0.028	6/1 - 9/30	Dry Crossing	000-03-01-013
6.5	Luzerne	41.30406	-75.846015	UNT to Susquehanna River	110915_WA_1002_E_MI	Minor	NRPW	E	CWF, MF	-	-	<100	4	0.007	0.002	6/1 - 11/30	Dry Crossing	000-03-01-014
7	Luzerne	41.29875	-75.834577	Susquehanna River	102315_WA_1001_P_MA	Major	TNW	P	WWF, MF	-	-	6,342,400	1,056	8.582	1.212	6/1 - 11/30	Dry Crossing	000-03-01-015
8.3	Luzerne	41.28933	-75.82849	UNT to Susquehanna River	043015_JC_1002_D_MI	Minor	-	Ditch	WWF, MF	-	-	<100	9	0.017	0.008	6/1 - 11/30	Dry Crossing	000-03-01-018
9.8	Luzerne	41.27971	-75.8117	Gardner Creek	PA-NHD-015	Int.	RPW	P	CWF, MF	-	-	5,811	56	0.073	0.07	6/1 - 9/30	Dry Crossing	000-03-01-021
10.9	Luzerne	41.26714	-75.79968	Mill Creek	PA-NHD-016	Int.	RPW	P	CWF, MF	III	-	6,016	25	0.047	0.033	6/1 - 9/30	Dry Crossing	000-03-01-023

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
11.3	Luzerne	41.2635	-75.793901	UNT to Deep Creek	PA-NHD-123	Minor	RPW	P	CWF, MF	III	-	627	18	0.031	0.021	6/1 - 9/30	Bore	000-03-01-024
11.5	Luzerne	41.26131	-75.791239	Deep Creek	121614_JC_1000_P_MI	Minor	RPW	P	CWF, MF	III	-	608	8	0.024	0.01	6/1 - 9/30	Dry Crossing	000-03-01-024
11.6	Luzerne	41.26049	-75.789718	UNT to Deep Creek	121614_JC_1001_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	3	0.012	0.005	6/1 - 9/30	Dry Crossing	000-03-01-024
12.7	Luzerne	41.25171	-75.778822	UNT to Mill Creek	121514_JC_1001_D_MI	Minor	-	Ditch	CWF, MF	III	-	<100	2	0.004	0.003	6/1 - 9/30	Dry Crossing	000-03-01-026
13	Luzerne	41.24988	-75.774086	UNT to Mill Creek	121814_JC_1010_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	6	0.048	0.032	6/1 - 9/30	Bore	000-03-01-027
13.1	Luzerne	41.24963	-75.773327	UNT to Mill Creek	121814_JC_1011_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	8	0.049	0.032	6/1 - 9/30	Dry Crossing	000-03-01-027
13.1	Luzerne	41.24908	-75.771894	UNT to Mill Creek	121814_JC_1013_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	5	0.009	0.006	6/1 - 9/30	Dry Crossing	000-03-01-027
13.2	Luzerne	41.2484	-75.770577	UNT to Mill Creek	121814_JC_1012_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	7	0.012	0.008	6/1 - 9/30	Bore	000-03-01-027
13.3	Luzerne	41.24799	-75.770246	UNT to Mill Creek	121814_JC_1007_D_MI	Minor	-	Ditch	CWF, MF	III	-	<100	10	0.017	0.011	6/1 - 9/30	Bore	000-03-01-027

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
13.3	Luzerne	41.24769	-75.770007	UNT to Mill Creek	121814_JC_1008_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	10	0.017	0.011	6/1 - 9/30	Bore	000-03-01-027
13.3, AR-029	Luzerne	41.25273	-75.766676	UNT to Mill Creek	081215_MK_017_P_IM	Minor	RPW	P	CWF, MF	III	-	<100	8	0.005	0	6/1 - 9/30	N/A	000-03-30-015
13.3, AR-029	Luzerne	41.24891	-75.767677	UNT to Mill Creek	081215_MK_016_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	2	0.002	0	6/1 - 9/30	N/A	000-03-30-015
13.3, AR-029	Luzerne	41.24863	-75.768057	UNT to Mill Creek	081215_MK_015_I_MI	Minor	RPW	I	CWF, MF	III	-	646	3	0.002	0	6/1 - 9/30	N/A	000-03-30-015
13.3, AR-029	Luzerne	41.24836	-75.768546	UNT to Mill Creek	081215_MK_014_P_IM	Int.	RPW	P	CWF, MF	III	-	627	12	0.009	0	6/1 - 9/30	N/A	000-03-30-015
13.3, AR-029	Luzerne	41.24835	-75.768758	UNT to Mill Creek	081215_MK_013_I_MI	Minor	RPW	I	CWF, MF	III	-	627	5	0.023	0	6/1 - 9/30	N/A	000-03-30-015
13.6	Luzerne	41.24406	-75.767529	UNT to Mill Creek	121814_JC_1005_P_MI	Minor	RPW	P	CWF, MF	III	-	176	7	0.038	0.025	6/1 - 9/30	Dry Crossing	000-03-01-028
13.6	Luzerne	41.24408	-75.767399	UNT to Mill Creek	121814_JC_1006_I_MI	Minor	RPW	I	CWF, MF	III	-	173	4	0.013	0.007	6/1 - 9/30	Dry Crossing	000-03-01-028
13.7	Luzerne	41.24309	-75.766327	UNT to Mill Creek	121814_JC_1004_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	5	0.024	0.016	6/1 - 9/30	Dry Crossing	000-03-01-028

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Types	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected Cons. ROW	Acres Affected Perm. ROW	Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
13.8	Luzerne	41.24165	-75.764321	UNT to Mill Creek	121814_JC_1003_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	74 *	0.039	0.018	6/1 - 9/30	Dry Crossing	000-03-01-028
13.9	Luzerne	41.24112	-75.763764	UNT to Mill Creek	121814_JC_1002_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	6	0.036	0.024	6/1 - 9/30	Dry Crossing	000-03-01-028
13.9	Luzerne	41.24054	-75.763007	UNT to Mill Creek	121814_JC_1001_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	6	0.06	0.047	6/1 - 9/30	Dry Crossing	000-03-01-028
14.1	Luzerne	41.23853	-75.760491	UNT to Mill Creek	111014_JC_1001_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	17	0.029	0.019	6/1 - 9/30	Dry Crossing	000-03-01-029
PennEast Mainline Route Pipeline - Delaware River Basin																		
14.7	Luzerne	41.2329	-75.751722	UNT to Little Bear Creek	S-SUR-025	Minor	RPW	P	HQ-CWF, MF	-	-	<100	4	0.001	0	6/1 - 9/30	Dry Crossing	000-03-01-030
15	Luzerne	41.22963	-75.749322	UNT to Little Bear Creek	043015_JC_1001_I_MI	Minor	RPW	I	HQ-CWF, MF	-	-	<100	7	0.003	0.002	6/1 - 9/30	Dry Crossing	000-03-01-030
16.2	Luzerne	41.21748	-75.73332	UNT to Bear Creek	112114_JC_1003_P_IM	Int.	RPW	P	HQ-CWF, MF	-	-	7,744	53	0.182	0.075	6/1 - 9/30	Dry Crossing	000-03-01-033
16.2	Luzerne	41.21727	-75.73299	Bear Creek	112114_JC_1002_P_MI	Minor	RPW	P	HQ-CWF, MF	-	-	7,756	11	0.021	0.013	6/1 - 9/30	Dry Crossing	000-03-01-033
16.4	Luzerne	41.21554	-75.730226	UNT to Bear Creek	112114_JC_1001_P_MI	Minor	RPW	P	HQ-CWF, MF	-	-	<100	6	0.034	0.023	6/1 - 9/30	Dry Crossing	000-03-01-033

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Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
16.6, AR-031	Luzerne	41.21757	-75.716888	UNT Meadow Run	081215_MK_018_P_MI	Minor	RPW	P	HQ-CWF, MF	-	-	2,835	4	0.004	0	6/1 - 9/30	N/A	000-03-03-017
16.6, AR-031	Luzerne	41.21731	-75.714311	UNT Meadow Run	081315_MK_020_I_MI	Minor	RPW	I	HQ-CWF, MF	-	-	<100	8	0.001	0	6/1 - 9/30	N/A	000-03-03-017
16.6, AR-031	Luzerne	41.21723	-75.70596	UNT Meadow Run	081315_MK_021_P_IN	Minor	RPW	P	HQ-CWF, MF	-	-	710	4	0.003	0	6/1 - 9/30	N/A	000-03-03-017
16.6, AR-031	Luzerne	41.21561	-75.692959	Meadow Run	081415_MK_023_P_IN	Minor	RPW	P	HQ-CWF, MF	-	-	154	5	0.025	0	6/1 - 9/30	N/A	000-03-03-017
16.6, AR-031	Luzerne	41.21561	-75.692959	UNT Meadow Run	081415_MK_024_P_MI	Minor	RPW	P	HQ-CWF, MF	-	-	147	7	0.005	0	6/1 - 9/30	N/A	000-03-03-017
16.6, AR-031	Luzerne	41.21751	-75.687998	UNT Meadow Run	081415_MK_025_I_MI	Minor	RPW	I	HQ-CWF, MF	-	-	<100	6	0.001	0	6/1 - 9/30	N/A	000-03-03-017
16.7	Luzerne	41.2125	-75.72588	Meadow Run	112014_JC_1003_P_IM	Int.	RPW	P	HQ-CWF, MF	-	-	3,526	45	0.111	0.044	6/1 - 9/30	Dry Crossing	000-03-01-034
16.9	Luzerne	41.21055	-75.723035	UNT Meadow Run	112014_JC_1002_P_MI	Minor	RPW	P	HQ-CWF, MF	-	-	<100	2	0.004	0.002	6/1 - 9/30	Dry Crossing	000-03-01-034
17.7	Luzerne	41.20261	-75.711271	UNT to Little Shades Creek	112014_JC_1001_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	<100	4	0.008	0.003	6/1 - 9/30	Dry Crossing	000-03-01-036

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Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
18.3	Luzerne	41.19699	-75.701663	Little Shades Creek	111914_JC_1002_P_IM	Major	RPW	P	HQ-CWF, MF	III	-	563	105	0.132	0.12	6/1 - 9/30	Dry Crossing	000-03-01-037
18.4	Luzerne	41.19636	-75.701686	UNT to Little Shades Creek	111914_JC_1001_P_IM	Int.	RPW	P	HQ-CWF, MF	III	-	582	19 *	0.009	0	6/1 - 9/30	Dry Crossing	000-03-01-037
19	Luzerne	41.18831	-75.697376	UNT to Little Shades Creeka	121814_JC_1014_D_MI	Minor	-	Ditch	HQ-CWF, MF	III	-	<100	27 *	0.001	0	6/1 - 9/30	Dry Crossing	000-03-01-039
19.1	Luzerne	41.1877	-75.697506	UNT to Little Shades Creek	121814_JC_1014_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	<100	32 *	0.011	0.002	6/1 - 9/30	Dry Crossing	000-03-01-039
19.6	Luzerne	41.17958	-75.696554	Shades Creek	121614_JC_1009_P_IM	Int.	RPW	P	HQ-CWF, MF	I, III	-	1,920	26	0.045	0.031	6/1 - 9/30	Dry Crossing	000-03-01-040
20	Luzerne	41.17351	-75.69632	UNT to Shades Creek	121714_JC_1001_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	10	0.044	0.038	6/1 - 9/30	Dry Crossing	000-03-01-041
20.1	Luzerne	41.17229	-75.696179	UNT to Shades Creek	121614_JC_1006_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	<100	14	0.095	0.065	6/1 - 9/30	Dry Crossing	000-03-01-041
21.2	Luzerne	41.15745	-75.693796	UNT to Stony Run	121614_JC_1004_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	<100	5	0.02	0.014	6/1 - 9/30	Dry Crossing	000-03-01-043
21.8, AR-033	Luzerne	41.14844	-75.67744	Stony Run	PA-NHD-039	Int.	RPW	P	HQ-CWF, MF	III	-	2,000	12	0.008	0	6/1 - 9/30	N/A	000-03-03-019

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Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
22.6	Luzerne	41.13744	-75.690063	UNT Stony Run	102115_WA_002_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	8	0.007	0.003	6/1 - 9/30	Dry Crossing	000-03-01-046
22.6	Luzerne	41.13696	-75.689904	UNT Stony Run	102115_WA_001_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	8	0.003	0.001	6/1 - 9/30	Dry Crossing	000-03-01-046
22.6	Luzerne	41.13571	-75.690348	Stony Run	050615_JC_1001_P_IM	Int.	RPW	P	HQ-CWF, MF	III	-	2,779	24	0.039	0.027	6/1 - 9/30	Dry Crossing	000-03-01-046
22.7	Luzerne	41.13574	-75.68966	UNT Stony Run	102115_WA_001_I_MI	Minor	NRPW	I	HQ-CWF, MF	III	-	2816	6	0.001	0	6/1 - 9/30	Dry Crossing	000-03-01-046
23	Luzerne, Carbon	41.13036	-75.689558	Lehigh River	052115_JC_1001_P_MA	Major	TNW	P	HQ-CWF, MF	III	-	146,560	444	1.014	0.51	6/1 - 9/30	Dry Crossing	000-03-01-047
25.0, AR-034	Carbon	41.09944	-75.68344	UNT to Lehigh River	PA-NHD-040	Minor	RPW	P	HQ-CWF, MF	III	-	339	9	0.013	0	6/1 - 9/30	N/A	000-03-03-020
25.4, AR-034A	Carbon	41.10114	-75.662572	UNT to Porter Run	012116_DB_1003_I_MI	Minor	RPW	I	HQ-CWF, MF	-	-	<100	3	0.002	0	6/1 - 9/30	N/A	000-03-03-020
25.4, AR-034A	Carbon	41.10121	-75.662106	Porter Run	012116_DB_1001_P_IN (1)	Int.	RPW	P	HQ-CWF, MF	-	-	474	11	0.006	0	6/1 - 9/30	N/A	000-03-01-050
25.4, AR-034B	Carbon	41.10115	-75.661051	Porter Run	012116_DB_1001_P_IN (2)	Int.	RPW	P	HQ-CWF, MF	-	-	448	17	0.008	0	6/1 - 9/30	N/A	000-03-01-051

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Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
26.6	Carbon	41.08406	-75.661181	UNT to Black Creek	102114_JC_1001_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	<100	13	0.047	0.034	6/1 - 9/30	Dry Crossing	000-03-01-054
27.3	Carbon	41.07353	-75.654975	UNT to Black Creek	102314_JC_1001_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	<100	12	0.087	0.053	6/1 - 9/30	Dry Crossing	000-03-01-055
30.3	Carbon	41.0409	-75.626771	UNT to Hawk Run	042415_JC_1006_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	1 *	0	0	6/1 - 9/30	Dry Crossing	000-03-01-061
30.9	Carbon	41.03159	-75.624807	UNT to Laurel Run	042415_JC_1002_P_IN (1)	Int.	RPW	P	HQ-CWF, MF	III	-	<100	24*	0.031	0.004	6/1 - 9/30	Dry Crossing	000-03-01-062
31.1	Carbon	41.03032	-75.624447	UNT to Laurel Run	042415_JC_1005_D_MI	Minor	-	Ditch	HQ-CWF, MF	III	-	<100	4	0.012	0.005	6/1 - 9/30	Dry Crossing	000-03-01-063
31.1	Carbon	41.02998	-75.624403	Laurel Run	042415_JC_1002_P_IN (2)	Int.	RPW	P	HQ-CWF, MF	III	-	<100	16	0.029	0.016	6/1 - 9/30	Dry Crossing	000-03-01-063
31.1	Carbon	41.03032	-75.624447	UNT to Laurel Run	042415_JC_1004_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	109	53	0.052	0.034	6/1 - 9/30	Dry Crossing	000-03-01-063
32.7, AR-038	Carbon	41.00857	-75.615349	UNT to Mud Run	S-SUR-044	Minor	RPW	P	HQ-CWF, MF	III	-	<100	5	0.007	0	6/1 - 9/30	N/A	000-03-03-024
33.1	Carbon	41.00288	-75.612921	Mud Run	042115_JC_1001_P_IM	Int.	RPW	P	HQ-CWF, MF	III	TS	16,960	48	0.114	0.057	6/15 - 9/30	Dry Crossing	000-03-01-067

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Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
33.1	Carbon	41.00266	-75.612872	UNT to Mud Run	042115_JC_1002_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	307	10	0.018	0.012	6/1 - 9/30	Dry Crossing	000-03-01-067
33.3	Carbon	40.99948	-75.612032	UNT to Mud Runa	042115_JC_1004_D_MI	Minor	-	Ditch	HQ-CWF, MF	III	-	218	15	0.028	0.018	6/1 - 9/30	Dry Crossing	000-03-01-067
33.3	Carbon	40.99896	-75.611872	UNT to Mud Run	042115_JC_1005_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	3	0.006	0.004	6/1 - 9/30	Dry Crossing	000-03-01-067
34.6	Carbon	40.98203	-75.620481	UNT to Stony Creek	042315_JC_1002_P_MI	Minor	RPW	P	EV, MF	III	-	666	5	0.049	0.036	6/1 - 9/30	Dry Crossing	000-03-01-070
34.7	Carbon	40.98098	-75.62127	Stony Creek	042315_JC_1003_P_IN	Int.	RPW	P	EV, MF	III	-	672	30	0.139	0.072	6/1 - 9/30	Dry Crossing	000-03-01-070
36.1	Carbon	40.96232	-75.630037	Yellow Run	PA-NHD-049	Minor	RPW	P	EV, MF	III	-	518	3	0.004	0.003	6/1 - 9/30	Dry Crossing	000-03-01-073
37.5	Carbon	40.94331	-75.634587	UNT to Wild Creek	061615_DB_1001_I_MI	Minor	RPW	I	EV, MF	III	-	<100	7	0.012	0.008	6/1 - 9/30	Dry Crossing	000-03-01-075
38.3	Carbon	40.93131	-75.634571	Wild Creek	061615_DB_1002_P_IN	Int.	RPW	P	EV, MF	III	-	334	10	0.019	0.012	6/1 - 9/30	Dry Crossing	000-03-01-077
39.5	Carbon	40.91746	-75.620741	UNT to White Oak Run	061615_DB_1003_I_MI	Minor	RPW	I	EV, MF	III	-	186	100 *	0.019	0	6/1 - 9/30	Dry Crossing	000-03-01-080

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Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
39.6	Carbon	40.91704	-75.62046	UNT to White Oak Run	091714_MK_1005_P_MI (1)	Minor	RPW	P	EV, MF	III	-	192	25	0.041	0.014	6/1 - 9/30	Dry Crossing	000-03-01-080
40.1	Carbon	40.91062	-75.614322	UNT to White Oak Run	091714_MK_1005_P_MI (2)	Minor	RPW	P	EV, MF	III	-	717	188	0.227	0.089	6/1 - 9/30	Dry Crossing	000-03-01-080
41.1	Carbon	40.90309	-75.600813	UNT to White Oak Run	PA-NHD-060	Minor	RPW	I	EV, MF	III	-	<100	3	0.005	0.003	6/1 - 9/30	Dry Crossing	000-03-01-083
41.2	Carbon	40.90302	-75.599486	UNT to White Oak Run	PA-NHD-061	Minor	RPW	I	EV, MF	III	-	<100	4	0.007	0.005	6/1 - 9/30	Dry Crossing	000-03-01-083
41.2	Carbon	40.90302	-75.599486	UNT to White Oak Run	PA-NHD-063	Minor	RPW	I	EV, MF	III	-	<100	4	0.007	0.005	6/1 - 9/30	Dry Crossing	000-03-01-083
41.3	Carbon	40.90288	-75.596717	UNT to White Oak Run	PA-NHD-062	Minor	RPW	I	EV, MF	III	-	<100	6	0.01	0.007	6/1 - 9/30	Dry Crossing	000-03-01-083
41.6	Carbon	40.90078	-75.59228	White Oak Run	PA-NHD-056	Minor	RPW	P	EV, MF	III	-	691	7	0.012	0.008	6/1 - 9/30	Dry Crossing	000-03-01-084
43.5	Carbon	40.88315	-75.554003	Wild Creek/ Beltzville	052215_JC_1001_LAKE_MA (1)	Major	RPW	Lake	EV, MF	III	-	13,863	164	0.011	0.011	6/1 - 9/30	HDD	000-03-01-088
44	Carbon	40.88315	-75.554003	Pohopoco Creek/Beltzville Lake	052215_JC_1001_LAKE_MA (2)	Major	RPW	Lake	CWF, MF	III	-	34,838	388	0.027	0.027	6/1 - 9/30	HDD	000-03-01-088

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
44.2	Carbon	40.87985	-75.549332	UNT to Pohopoco Creek	061715_DB_1001_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	20	0.002	0.002	6/1 - 9/30	HDD	000-03-01-089
44.3	Carbon	40.88018	-75.548342	UNT to Pohopoco Creek	122215_DB_1001_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	47	0.016	0.004	6/1 - 9/30	HDD	000-03-01-089
44.4	Carbon	40.87931	-75.547402	UNT to Pohopoco Creek	122215_DB_1000_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	171*	0.236	0	6/1 - 9/30	N/A	000-03-01-089
44.4	Carbon	40.87943	-75.547432	UNT to Pohopoco Creek	122215_DB_1001_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	110	0.015	0	6/1 - 9/30	N/A	000-03-01-089
44.8	Carbon	40.8743	-75.544352	UNT to Hunter Creek	PA-NHD-070	Minor	RPW	I	HQ-CWF, MF	III	-	<100	7	0.012	0.008	6/1 - 9/30	Dry Crossing	000-03-01-090
45.0, AR-046	Carbon	40.87229	-75.540992	UNT to Hunter Creek	081715_MK_026_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	371	5	0.003	0	6/1 - 9/30	N/A	000-03-03-030
45.1	Carbon	40.87214	-75.542258	UNT to Hunter Creek	051115_JC_1002_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	371	4	0.003	0.002	6/1 - 9/30	Dry Crossing	000-03-01-091
45.6	Carbon	40.86568	-75.538078	UNT to Hunter Creek	051115_JC_1001_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	154	3	0.003	0.002	6/1 - 9/30	Dry Crossing	000-03-01-092
48.1	Carbon	40.83739	-75.508783	Buckwha Creek	090914_WA_1000_P_IM	Int.	RPW	P	CWF, MF	III	ATW, TS	20,544	57	0.097	0.065	6/15 - 9/30	Dry Crossing	000-03-01-097

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
48.6, AR-049	Carbon	40.82891	-75.500685	UNT to Aquashicola Creek	081715_MK_028_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	76 *	0.009	0	6/1 - 9/30	N/A	000-03-03-033
48.6, AR-049	Carbon	40.82798	-75.500335	UNT to Aquashicola Creek	081715_MK_029_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	2	0.001	0	6/1 - 9/30	N/A	000-03-03-033
49.2	Carbon	40.82494	-75.51004	Aquashicola Creek	072215_JC_1001_P_IM	Int.	RPW	P	HQ-CWF, MF	III	ATW	13,869	36	0.062	0.041	6/15 - 9/30	Dry Crossing	000-03-01-099
52.4	Northampton	40.80103	-75.509955	UNT to Indian Creek	072415_JC_1001_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	2 *	0.001	0	6/1 - 9/30	Dry Crossing	000-03-01-105
53.3	Northampton	40.80093	-75.495437	UNT to Indian Creek	PA-NHD-080	Minor	RPW	I	CWF, MF	III	-	<100	3	0.005	0.003	6/1 - 9/30	Dry Crossing	000-03-01-107
53.4	Northampton	40.79917	-75.494023	UNT to Indian Creek	S-SUR-081	Minor	RPW	P	CWF, MF	III	-	<100	7	0.012	0.008	6/1 - 9/30	Dry Crossing	000-03-01-107
53.4	Northampton	40.79907	-75.492816	UNT to Indian Creek	S-SUR-082	Minor	RPW	P	CWF, MF	III	-	<100	4	0.007	0.005	6/1 - 9/30	Dry Crossing	000-03-01-107
53.5	Northampton	40.79893	-75.491402	UNT to Indian Creek	S-SUR-083	Minor	RPW	P	CWF, MF	III	-	<100	5	0.009	0.006	6/1 - 9/30	Dry Crossing	000-03-01-107
54.3	Northampton	40.78988	-75.481262	Indian Creek	PA-NHD-084	Int.	RPW	P	CWF, MF	III	ATW	1,651	13	0.023	0.017	6/15 - 9/30	Dry Crossing	000-03-01-109

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
55.7	Northampton	40.78372	-75.459065	UNT to Hokendauqua Creek	102815_WA_1001_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	14	0.059	0.015	6/1 - 9/30	Dry Crossing	000-03-01-112
55.9	Northampton	40.78061	-75.457989	Hokendauqua Creek	051215_JC_1002_P_IN/ PA-NHD-087	Int.	RPW	P	CWF, MF	III	ATW, TS	5,939	57	0.107	0.07	6/15 - 9/30	Dry Crossing	000-03-01-112
55.9	Northampton	40.78062	-75.457848	UNT to Hokendauqua Creek	051215_JC_1001_D_MI	Minor	-	Ditch	CWF, MF	III	-	5,939	5	0.008	0.006	6/15 - 9/30	Dry Crossing	000-03-01-112
56	Northampton	40.77994	-75.457027	UNT to Hokendauqua Creek	051215_JC_1003_D_MI	Minor	NRPW	Ditch	CWF, MF	III	-	<100	4	0.006	0.002	6/15 - 9/30	Bore	000-03-01-112
56.7	Northampton	40.77182	-75.44719	UNT to Hokendauqua Creek	PA-NHD-088	Minor	RPW	P	CWF, MF	III	-	851	22	0.025	0.02	6/1 - 9/30	Dry Crossing	000-03-01-114
58.5	Northampton	40.7552	-75.423024	UNT to Monocacy Creek	PA-NHD-089	Minor	RPW	I	HQ-CWF, MF	III	-	243	16	0.027	0.018	6/1 - 9/30	Dry Crossing	000-03-01-117
59	Northampton	40.74962	-75.416463	UNT to Monocacy Creek	090314_DB_1011_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	5	0.009	0.006	6/1 - 9/30	Dry Crossing	000-03-01-119
59.2	Northampton	40.74741	-75.413552	UNT to Monocacy Creek	090414_DB_1012_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	<100	5	0.007	0.006	6/1 - 9/30	Dry Crossing	000-03-01-119
59.2	Northampton	40.74722	-75.413331	UNT to Monocacy Creek	090414_DB_1013_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	<100	8	0.021	0.016	6/1 - 9/30	Dry Crossing	000-03-01-119

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		In-stream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
60.3	Northampton	40.73697	-75.399418	Monocacy Creek	051215_JC_1005_P_IN / PA-NHD-091	Int.	RPW	P	HQ-CWF, MF	I, III	ATW, TS	2,476	28	0.046	0.031	6/15 - 9/30	Dry Crossing	000-03-01-121
60.6	Northampton	40.736	-75.393612	UNT to Monocacy Creek	090314_DB_1005_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	9	0.016	0.011	6/1 - 9/30	Bore	000-03-01-122
60.6	Northampton	40.73577	-75.392242	UNT to Monocacy Creek	090314_DB_1007_E_MI	Minor	NRPW	E	HQ-CWF, MF	III	-	<100	4	0.008	0.005	6/1 - 9/30	Bore	000-03-01-122
60.7	Northampton	40.73582	-75.392494	UNT to Monocacy Creek	090314_DB_1006_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	<100	6	0.01	0.007	6/1 - 9/30	Dry Crossing	000-03-01-122
61.4	Northampton	40.73449	-75.377273	East Branch Monocacy Creek	111214_JC_1004_P_IM	Int.	RPW	P	HQ-CWF, MF	III	-	2,790	24	0.041	0.027	6/1 - 9/30	Dry Crossing	000-03-01-123
62.3	Northampton	40.72904	-75.364381	UNT to East Branch Monocacy Creeka	PA-NHD-094	Minor	RPW	P	HQ-CWF, MF	III	-	401	8	0.014	0.009	6/1 - 9/30	Dry Crossing	000-03-01-125
62.8	Northampton	40.72582	-75.356915	UNT to East Branch Monocacy Creek	051415_JC_1001_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	128	3	0.02	0.013	6/1 - 9/30	Bore	000-03-01-126
63.5	Northampton	40.72486	-75.342842	UNT to East Branch Monocacy Creek	051415_JC_1002_P_IN	Int.	RPW	P	HQ-CWF, MF	III	-	3,002	19	0.032	0.022	6/1 - 9/30	Dry Crosing	000-03-01-128

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
63.7	Northampton	40.72318	-75.3405	UNT to East Branch Monocacy Creeka	051415_JC_1003_D_MI	Minor	RPW	Ditch	HQ-CWF, MF	III	-	<100	2	0.003	0.002	N/A	Bore	000-03-01-128
66.9	Northampton	40.69194	-75.305705	UNT to Monocacy Creek	PA-NHD-098	Minor	RPW	I	HQ-CWF, MF	III	-	<100	2	0.003	0.002	6/1 - 9/30	Dry Crossing	000-03-01-134
70.4	Northampton	40.65089	-75.28258	UNT to Lehigh River	S-SUR-100	Minor	RPW	P	CWF, MF	-	-	1,056	6	0.01	0.007	6/1 - 9/30	HDD	000-03-01-141
70.9	Northampton	40.64303	-75.27928	Lehigh Canal	PA-NHD-104	Int.	RPW	P	WWF	-	-	864,000	67	0.076	0.076	6/1-11/30	HDD	000-03-01-142
71.1	Northampton	40.64144	-75.28344	Lehigh River	PA-NHD-099	Major	TNWa	P	WWF	-	-	864,000	305	0.4	0.4	6/1-11/30	HDD	000-03-01-143
71.5, AR-072B	Northampton	40.6352	-75.277834	UNT to Lehigh River	081815_MK_030_E_MI	Minor	NRPW	E	WWF	-	-	<100	7	0.006	0	6/1-11/30	N/A	000-03-03-050
72.1	Northampton	40.62835	-75.272092	UNT to Bull Run	092614_GO_1001_P_IM	Int.	RPW	P	CWF, MF	III	-	<100	15	0.007	0.005	6/1 - 9/30	Dry Crossing	000-03-01-145
72.2, AR-074	Northampton	40.62772	-75.270208	UNT to Bull Run	S-SUR-113(1)	Minor	RPW	P	CWF, MF	III	-	<100	3	0.002	0	6/1 - 9/30	N/A	000-03-03-051
72.2, AR-074	Northampton	40.62809	-75.269869	UNT to Bull Run	S-SUR-112	Minor	RPW	P	CWF, MF	III	-	<100	3	0.002	0	6/1 - 9/30	N/A	000-03-03-051

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
72.3	Northampton	40.62653	-75.269701	UNT to Bull Run	S-SUR-113(2)	Minor	RPW	P	CWF, MF	III	-	<100	3	0.005	0.003	6/1 - 9/30	Dry Crossing	000-03-01-145
72.5	Northampton	40.62504	-75.266102	UNT to Bull Run	051415_JC_1006_E_MI	Minor	RPW	E	CWF, MF	III	-	<100	3	0.005	0.003	6/1 - 9/30	Dry Crossing	000-03-01-146
72.6	Northampton	40.62434	-75.264564	UNT to Bull Run	S-SUR-115	Minor	RPW	P	CWF, MF	III	-	<100	2	0.005	0.003	6/1 - 9/30	Dry Crossing	000-03-01-146
72.6	Northampton	40.62364	-75.264036	UNT to Bull Run	S-SUR-117	Minor	RPW	P	CWF, MF	III	-	<100	2	0.005	0.003	6/1 - 9/30	Dry Crossing	000-03-01-146
72.7	Northampton	40.62318	-75.263283	UNT to Bull Run	102715_WA_1001_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	11	0.018	0.013	6/1 - 9/30	Dry Crossing	000-03-01-146
72.7	Northampton	40.62307	-75.263163	UNT to Bull Run	102715_WA_1002_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	5	0.008	0.003	6/1 - 9/30	Dry Crossing	000-03-01-146
72.7	Northampton	40.62265	-75.262633	UNT to Bull Run	102715_WA_1001_P_MI	Minor	RPW	P	CWF, MF	III	-	<100	8	0.017	0.014	6/1 - 9/30	Dry Crossing	000-03-01-146
72.8	Northampton	40.62195	-75.261746	UNT to Bull Run	042815_JC_1005_I_MI	Minor	RPW	I	CWF, MF	III	-	<100	6	0.011	0.007	6/1 - 9/30	Dry Crossing	000-03-01-146
73	Northampton	40.62029	-75.259891	UNT to Bull Run	042815_JC_1001_E_MI	Minor	NRPW	E	CWF, MF	III	-	<100	8	0.011	0.008	6/1 - 9/30	Dry Crossing	000-03-01-146

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			
73.6	Northampton	40.61789	-75.249167	UNT to Frya Run	010615_JC_1004_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	122	7	0.012	0.008	6/1 - 9/30	Dry Crossing	000-03-01-148
74.6	Northampton	40.60894	-75.233038	Frya Run	091814_MK_1009_P_IM	Int.	RPW	P	HQ-CWF, MF	I, III	-	1,715	15	0.025	0.017	6/1 - 9/30	Dry Crossing	000-03-01-150
74.9	Northampton	40.60688	-75.229381	UNT to Frya Run	062415_BT_1002_I_MI	Minor	RPW	I	HQ-CWF, MF	III	-	<100	4	0.007	0.006	6/1 - 9/30	Bore	000-03-01-150
74.9	Northampton	40.60688	-75.22908	UNT to Frya Run	062415_BT_1001_P_MI	Minor	RPW	P	HQ-CWF, MF	III	-	<100	51	0.05	0.028	6/1 - 9/30	Bore	000-03-01-150
75.7	Northampton	40.60178	-75.219041	UNT to Cooks Creek	111314_JC_1002_I_MI	Minor	RPW	I	EV, MF	III	-	<100	6	0.01	0.007	6/1 - 9/30	Dry Crossing	000-03-01-152
75.7	Northampton	40.60179	-75.219052	UNT to Cooks Creek	111314_JC_1003_E_MI	Minor	NRPW	E	EV, MF	III	-	<100	2	0.002	0.002	6/1 - 9/30	Dry Crossing	000-03-01-152
75.7	Northampton	40.60142	-75.218427	UNT to Cooks Creek	111314_JC_1001_I_MI	Minor	RPW	I	EV, MF	III	-	<100	23	0.012	0.011	6/1 - 9/30	Dry Crossing	000-03-01-152
76.2	Bucks	40.59683	-75.211361	UNT to Delaware River	051515_JC_1004_E_MI	Minor	RPW	E	WWF,MF	-	-	<100	8	0.015	0.009	6/1 - 11/30	Dry Crossing	000-03-01-153
76.5, AR-079	Bucks	40.59414	-75.211804	UNT to Cooks Creek	PA-NHD-120	Minor	RPW	P	EV, MF	III	-	<100	10	0.007	0	6/1 - 9/30	N/A	000-03-03-055

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Type	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected Cons. ROW	Acres Affected Perm. ROW	Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
77.6	Bucks	40.58414	-75.194827	Delaware Canal	052915_JC_1002_C_IN	Int.	RPW	Canal	WWF,MF	-	-	4,057,600	48	0.004	0.004	6/1 - 11/30	HDD	000-03-01-156
77.6	Bucks	40.58399	-75.193283	Delaware River	122315_DB_1001_P_MA	Major	TNW	P	WWF	-	-	4,057,600	278	0.31	0.314	6/1 - 11/30	HDD	000-03-01-156
Compressor Station - Delaware River Basin																		
26.6	Carbon	41.082	-75.667761	UNT to Black Creek	082515_BT_1001_P_IM	Int.	RPW	P	HQ-CWF, MF	III	-	346	11	0.03	0.03	6/1 - 9/30	N/A	000-03-01-054
Hellertown Lateral - Delaware River Basin																		
0.2	Northampton	40.62984	-75.281285	Bull Run	PA-NHD-110	Int.	RPW	P	CWF, MF	III	-	550	10	0.055	0.04	6/1 - 9/30	Dry Crossing	Yes
												Total	5332	14.518	4.814			

Table G-5

Waterbodies Crossed by the Project in Pennsylvania

Facility/ Mile Post	County	Latitude (dd nad83)	Longitude (dd nad83)	Waterbody Name	Waterbody ID	FERC Class	Waters Types	Stream Type	PA Code Ch. 93 Desig.	Wild Trout Waters	ATW	Upstream Drainage Area at Crossing (acres)	Crossing Width a/	Acres Affected		Instream Construction Period	Proposed Crossing Method	Alignment Sheet, Plan Sheet, or Figure #
														Cons. ROW	Perm. ROW			

Key:
P = Perennial, I = Intermittent, E = Ephemeral
Pennsylvania Code Ch. 93 Designated Use (Pennsylvania Code 2014).
EV = Exceptional Value Waters
HQ = High Quality Waters
Surface water that meets one or more to the conditions listed in 93.4b.
CWF = Cold Water Fishes
Maintenance or propagation, or both, to fish species including the family Salmonidae and additional flora and fauna, which are indigenous to a cold water habitat.
WWF = Warm Water Fishes
Maintenance and propagation to fish species and additional flora and fauna, which are indigenous to a warm water habitat.
MF = Migratory Fishes
Passage, maintenance, and propagation to anadromous and catadromous fishes and other fishes, which ascend to flowing waters to complete their life cycle.
[viii] Wild Trout Waters, Natural Reproduction, January 2015 (PFBC, 2015a), Wild Trout Waters (PFBC, 2015b), Class A Waters, December 2013 (PFBC, 2015c).
Wild Trout Waters include:
I = Class A Wild Trout Streams: Streams that support a population to naturally produced trout to sufficient size and abundance to support a long-term and rewarding sport fishery.
II = Wilderness Trout Streams: Wilderness trout stream management is based upon the provision to a wild trout fishing experience in a remote, natural, and unspoiled environment where man's disruptive activities are minimized.
III = Wild Trout Streams: Stream sections supporting naturally reproducing populations to trout. A wild trout stream section is a biological designation that does not determine how it is managed; therefore, these streams may also be stocked with hatchery trout by the Commission.
ATW = Approved Trout Waters
TSF Trout Stocked Fishery
Notes:
a/ Crossing width based on waters at time to delineation or aerial photography for NHD waters as provided in PennEast (2015)
b/ Susquehanna River crossing includes an additional 23.5 acres of temporary disturbance due to drying of river bed between coffer dams.

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
PennEast Mainline – Upper Delaware River Basin																
77.7	Hunterdon	40.5838135	-75.1921417	UNK	051415_SQ_1002_POND_IN	Minor	RPW	P	N/A	50	9	0.002	0.002	6/1-11/30	HDD	000-03-01-156
80.0	Hunterdon	40.5729276	-75.1560378	Delaware River UNT	NJ-NHD-130	Minor	RPW	P	FW2-TPC1	300	5	0.009	0.006	6/1 - 9/15	Dry Crossing	000-03-01-161
80.2	Hunterdon	40.5734552	-75.1532075	Delaware River UNT	NJ-NHD-131	Minor	RPW	P	FW2-NT	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-161
80.4	Hunterdon	40.5748574	-75.1493768	Delaware River UNT	NJ-NHD-216	Minor	RPW	P	FW2-NT	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-162
80.7	Hunterdon	40.5766161	-75.1437278	Delaware River UNT	NJ-NHD-218	Minor	RPW	P	FW2-NT	50	9	0.012	0.008	7/1-9/30	Dry Crossing	000-03-01-162
80.8	Hunterdon	40.576905	-75.1427532	Delaware River UNT	NJ-NHD-220	Minor	UNK	P	FW2-NT	50	10	0.005	0.004	7/1-9/30	Dry Crossing	000-03-01-162
80.8	Hunterdon	40.5768394	-75.1428928	Delaware River UNT	NJ-NHD-219	Minor	UNK	P	FW2-NT	50	5	0.003	0.002	7/1-9/30	Dry Crossing	000-03-01-162
80.8	Hunterdon	40.5770204	-75.1429363	Delaware River UNT	NJ-NHD-132	Minor	RPW	P	FW2-NT	50	5	0.006	0.004	7/1-9/30	Dry Crossing	000-03-01-163
81.1	Hunterdon	40.5789508	-75.1371057	Delaware River UNT	NJ-NHD-133	Minor	RPW	P	FW2-NT	50	6	0.011	0.007	7/1-9/30	Dry Crossing	000-03-01-163.1

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
81.5	Hunterdon	40.5817035	-75.1310039	Delaware River UNT	NJ-NHD-134	Minor	RPW	P	FW2-NT	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-163.1
81.7	Hunterdon	40.5810491	-75.1223699	Delaware River UNT	081215_JFL_1001_P_MI	Minor	RPW	P	FW2-NT	50	4	0.007	0.005	7/1-9/30	Dry Crossing	000-03-01-164
81.9	Hunterdon	40.5808461	-75.1175399	Delaware River UNT	081215_SAB_1004_E_MI	Minor	RPW	E	FW2-NT	300	4	0.007	0.005	7/1-9/30	Dry Crossing	000-03-01-164
82	Hunterdon	40.5810641	-75.1155345	Spring Mills Brook UNT	052015_JC_1001_E_MI	Minor	NPRW	E	FW2-TPC1	300	8	0.015	0.01	6/1 - 9/15	Dry Crossing	000-03-01-165
82.4	Hunterdon	40.5821722	-75.1092949	Spring Mills Brook	S-SUR-139	Minor	RPW	P	FW2-TPC1	300	7	0.012	0.008	6/1 - 9/15	Dry Crossing	000-03-01-165
82.4	Hunterdon	40.5820822	-75.1097732	Spring Mills Brook	NJ-NHD-138	Minor	RPW	P	FW2-TPC1	300	6	0.01	0.007	6/1 - 9/15	Dry Crossing	000-03-01-165
82.7	Hunterdon	40.5822532	-75.1021432	Spring Mills Brook UNT	NJ-NHD-140	Minor	RPW	P	FW2-TPC1	300	6	0.009	0.007	6/1 - 9/15	Dry Crossing	000-03-01-166
83.2	Hunterdon	40.5821624	-75.0937132	Hakihokake Creek	NJ-NHD-008	Intermediate	RPW	P	FW2-TPC1	300	45	0.077	0.052	6/1 - 9/15	Bore	000-03-01-167
83.8	Hunterdon	40.5814543	-75.0813828	Hakihokake Creek UNT	NJ-NHD-142	Minor	RPW	P	FW2-TPC1	300	5	0.009	0.006	6/1 - 9/15	Dry Crossing	000-03-01-168
84.4	Hunterdon	40.5758658	-75.0739529	Delaware River UNT	S-SUR-144	Minor	RPW	P	FW2-NT	50	7	0.019	0.015	7/1-9/30	Dry Crossing	000-03-01-169

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
84.8	Hunterdon	40.5745948	-75.0689313	Delaware River UNT	NJ-NHD-225	Minor	RPW	P	FW2-NT	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-170
85.4	Hunterdon	40.5718393	-75.0602315	Harihokake Creek UNT	NJ-NHD-232	Minor	RPW	P	FW2-TMC1	300	6	0.01	0.007	6/16- 9/30	Dry Crossing	000-03-01-171
85.6	Hunterdon	40.5699698	-75.0567777	Harihokake Creek	NJ-NHD-034	Intermediate	RPW	P	FW2-TMC1	300	92	0.15	0.105	6/16- 9/30	Dry Crossing	000-03-01-172
85.8	Hunterdon	40.5673971	-75.0563256	Harihokake Creek UNT	NJ-NHD-245	Minor	RPW	P	FW2-TMC1	300	5	0.01	0.007	6/16- 9/30	Dry Crossing	000-03-01-172
85.9	Hunterdon	40.5575406	-75.0618224	Harihokake Creek UNT	091014_WA_1004_I_MI	Minor	RPW	I	FW2-TMC1	300	7	0.012	0.008	6/16- 9/30	Dry Crossing	000-03-01-172.2
86	Hunterdon	40.5564741	-75.0617642	Harihokake Creek UNT	091014_WA_1015_E_MI	Intermediate	NRPW	E	FW2-TMC1	300	13	0.019	0.013	6/16- 9/30	Dry Crossing	000-03-01-172.2
86.3	Hunterdon	40.5614067	-75.0597793	Harihokake Creek UNT	NJ-NHD-037	Intermediate	RPW	P	FW2-TMC1	300	66	0.115	0.076	6/16- 9/30	Dry Crossing	000-03-01-172.1
86.7	Hunterdon	40.5461735	-75.0597192	Harihokake Creek	NJ-NHD-043	Intermediate	UNK	P	FW2-TMC1	300	58	0.099	0.066	6/16-9/30	Dry Crossing	000-03-01-174
87.2	Hunterdon	40.5411825	-75.0567221	Delaware River UNT	NJ-NHD-154	Intermediate	RPW	P	FW2-NT	50	13	0.02	0.013	7/1-9/30	Dry Crossing	000-03-01-175
87.7	Hunterdon	40.536297	-75.0489718	Nishisakawick Creek	091114_WA_1001_P_IM	Intermediate	RPW	P	FW2-NTC1	300	59	0.098	0.066	6/16- 9/30	Bore	000-03-01-176

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
87.9	Hunterdon	40.5345386	-75.047214	Nishisakawick Creek UNT	051515_SQ_1002_P_IN	Intermediate	RPW	P	FW2-NTC1	300	81	0.138	0.097	7/1-9/30	Dry Crossing	000-03-01-176
88.4	Hunterdon	40.5279622	-75.0419086	Little Nishisakawick Creek	NJ-NHD-014	Intermediate	RPW	P	FW2-NTC1	300	22	0.037	0.025	7/1-9/30	Dry Crossing	000-03-01-177
88.5	Hunterdon	40.5271034	-75.0414989	Little Nishisakawick Creek UNT	091114_WA_1008_E_MI	Minor	NRPW	E	FW2-NTC1	300	1	0.001	0.001	7/1-9/30	Dry Crossing	000-03-01-177
88.8	Hunterdon	40.5228308	-75.0402107	Little Nishisakawick Creek UNT	091114_WA_1004_I_MI	Intermediate	RPW	I	FW2-NTC1	300	10	0.017	0.011	7/1-9/30	Dry Crossing	000-03-01-178
88.8	Hunterdon	40.5225853	-75.0401314	Little Nishisakawick Creek UNT	091114_WA_1003_I_MI	Minor	RPW	I	FW2-NTC1	300	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-178
88.9	Hunterdon	40.5210354	-75.0396316	Little Nishisakawick Creek UNT	S-SUR-158	Minor	RPW	P	FW2-NTC1	300	9	0.015	0.01	7/1-9/30	Dry Crossing	000-03-01-178
89.6	Hunterdon	40.5117103	-75.0387974	Copper Creek UNT	NJ-NHD-159	Minor	RPW	P	FW2-NT	50	7	0.01	0.007	7/1-9/30	Dry Crossing	000-03-01-180
90.0	Hunterdon	40.5104532	-75.0317337	Copper Creek	NJ-NHD-044	Intermediate	RPW	P	FW2-NT	50	36	0.066	0.042	7/1-9/30	Dry Crossing	000-03-01-180
90.4	Hunterdon	40.5062253	-75.0268515	Copper Creek UNT	NJ-SWQS-01	Minor	RPW	P	FW2-NT	50	7	0.006	0.002	7/1-9/30	Dry Crossing	000-03-01-181
91.6	Hunterdon	40.4897264	-75.0186914	Lockatong Creek	NJ-NHD-248	Major	RPW	P	FW2-NTC1	300	248	0.27	0.27	7/1-9/30	HDD	000-03-01-184

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
92.2	Hunterdon	40.4803719	-75.0171711	Lockatong Creek	NJ-NHD-018	Intermediate	RPW	P	FW2-NTC1	300	43	0.05	0.05	7/1-9/30	HDD	000-03-01-185
92.4	Hunterdon	40.4773627	-75.0164298	Lockatong Creek	NJ-NHD-162	Major	RPW	P	FW2-NTC1	300	110	0.13	0.13	7/1-9/30	HDD	000-03-01-186
93.2	Hunterdon	40.4716519	-75.0116421	Uncoded Tributary	051915_SQ_1001_P_MI	Minor	RPW	P	FW2-NT	50	8	0.01	0.006	7/1-9/30	Dry Crossing	000-03-01-187
93.4	Hunterdon	40.4683968	-75.0106702	Lockatong Creek UNT	NJ-NHD-165	Minor	RPW	P	FW2-NTC1	300	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-187
94.5	Hunterdon	40.4565497	-74.99689	Wickecheoke Creek UNT	S-SUR-166	Minor	RPW	P	FW2-NTC1	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-190
94.6	Hunterdon	40.4560204	-74.9962785	Wickecheoke Creek UNT	S-SUR-167	Minor	RPW	P	FW2-NTC1	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-190
95.1	Hunterdon	40.4507792	-74.9901674	Wickecheoke Creek UNT	NJ-NHD-168	Minor	RPW	P	FW2-NTC1	300	5	0.011	0.007	7/1-9/30	Dry Crossing	000-03-01-191
95.3	Hunterdon	40.4486852	-74.9876888	UNK	NJ-NHD-019	Major	N/A	POND	N/A	50	110	0.178	0.115	7/1-9/30	Dry Crossing	000-03-01-191
96.1	Hunterdon	40.4394698	-74.978915	Wickecheoke Creek UNT	NJ-NHD-169	Minor	RPW	P	FW2-TMC1	300	6	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-193
96.3	Hunterdon	40.4380554	-74.9764648	Wickecheoke Creek UNT	NJ-NHD-170	Minor	RPW	P	FW2-TMC1	300	6	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-193

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
96.7	Hunterdon	40.4327943	-74.9713805	Wickecheoke Creek UNT	NJ-NHD-171	Minor	RPW	P	FW2-TMC1	300	5	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-194
96.8	Hunterdon	40.431966	-74.9706959	Wickecheoke Creek UNT	NJ-NHD-172	Minor	RPW	P	FW2-TMC1	300	5	0.002	0	6/16- 9/30	Bore	000-03-01-194
96.8	Hunterdon	40.4322383	-74.9708764	Wickecheoke Creek	NJ-NHD-021	Intermediate	RPW	P	FW2-TMC1	300	71	0.121	0.081	6/16-9/30	Dry Crossing	000-03-01-194
97.3	Hunterdon	40.4261781	-74.9648425	Wickecheoke Creek UNT	NJ-NHD-173	Minor	RPW	P	FW2-TMC1	300	5	0.011	0.007	6/16- 9/30	Dry Crossing	000-03-01-195
98.5	Hunterdon	40.4136134	-74.9520997	Delaware and Raritan Canal UNT	NJ-NHD-174	Minor	RPW	P	FW2-NT	150	6	0.011	0.008	7/1-9/30	Dry Crossing	000-03-01-197
99.6	Hunterdon	40.4002779	-74.9436146	Alexauken Creek UNT	NJ-NHD-176	Minor	RPW	P	FW2-TMC1	300	5	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-200
100.0	Hunterdon	40.3986509	-74.9396064	Alexauken Creek UNT	NJ-NHD-177A	Intermediate	RPW	P	FW2-TMC1	300	93	0.052	0.052	6/16- 9/30	Dry Crossing	000-03-01-201
100.0	Hunterdon	40.3981218	-74.9390961	Alexauken Creek UNT	NJ-NHD-177B	Minor	RPW	P	FW2-TMC1	300	7	0.008	0.008	6/16- 9/30	Dry Crossing	000-03-01-201
100.1	Hunterdon	40.3974449	-74.9384758	Alexauken Creek UNT	NJ-NHD-178	Minor	RPW	P	FW2-TMC1	300	10	0.014	0.014	6/16- 9/30	Dry Crossing	000-03-01-201
100.4	Hunterdon	40.3941243	-74.9352755	Alexauken Creek	NJ-NHD-024	Intermediate	RPW	P	FW2-TMC1	300	50	0.058	0.058	6/16- 9/30	Dry Crossing	000-03-01-202

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
100.9	Hunterdon	40.3880034	-74.9302498	Alexauken Creek UNT	052915_SQ_1001_E_MI	Minor	NRPW	E	FW2-TMC1	300	5	0	0	6/16-9/30	Dry Crossing	000-03-01-202
101	Hunterdon	40.3860583	-74.9275577	Alexauken Creek UNT	S-SUR-184	Minor	RPW	P	FW2-NTC1	300	5	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-202
101.3	Hunterdon	40.3824756	-74.9240586	Swan Creek UNT	052815_SQ_1001_P_MI	Intermediate	RPW	P	FW2-NT	50	16	0.025	0.018	7/1-9/30	Dry Crossing	000-03-01-203
101.9	Hunterdon	40.374177	-74.9242146	Swan Creek UNT	NJ-NHD-186	Minor	RPW	P	FW2-NT	50	7	0.013	0.008	7/1-9/30	Dry Crossing	000-03-01-204
102.1	Hunterdon	40.3707372	-74.9244668	Swan Creek UNT	080515_SQ_1003_E_MI	Minor	NRPW	E	FW2-NT	50	4	0.005	0	7/1-9/30	Dry Crossing	000-03-01-205
102.1	Hunterdon	40.370522	-74.924516	Swan Creek UNT	080515_SQ_1004_E_MI	Minor	NRPW	E	FW2-NT	50	6	0.017	0	7/1-9/30	Dry Crossing	000-03-01-205
102.8	Hunterdon	40.3616722	-74.9257405	Lambertville Lower Reservoir	NJ-NHD-189	Minor	RPW	P	FW2-NT	50	6	0.01	0.007	7/1-9/30	Dry Crossing	000-03-01-206
102.8	Hunterdon	40.3612415	-74.9257213	Swan Creek UNT	NJ-NHD-188	Intermediate	RPW	P	FW2-NT	50	13	0.011	0.008	7/1-9/30	Dry Crossing	000-03-01-206
102.9	Hunterdon	40.3596553	-74.9257293	Swan Creek UNT	NJ-NHD-191	Intermediate	RPW	P	FW2-NT	50	12	0.027	0.013	7/1-9/30	Dry Crossing	000-03-01-206
104.6	Mercer	40.3386423	-74.9192104	Moores Creek UNT	S-SUR-194	Minor	RPW	P	FW2-TM	150	7	0.012	0.008	6/16- 9/30	Bore	000-03-01-210

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
104.8	Mercer	40.3381419	-74.9161298	Moores Creek UNT	NJ-NHD-195	Intermediate	RPW	P	FW2-TM	150	14	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-210
105.3	Mercer	40.3357774	-74.907082	Moores Creek UNT	060315_SQ_1005_P_MI	Minor	RPW	P	FW2-TM	150	4	0.01	0.006	6/16- 9/30	Dry Crossing	000-03-01-211
105.7	Mercer	40.33472	-74.9001233	Moores Creek	060415_SQ_1003_P_IN	Intermediate	RPW	P	FW2-TM	150	57	0.066	0.066	6/16- 9/30	HDD	000-03-01-212
105.9	Mercer	40.3338743	-74.8949533	Moores Creek UNT	060415_SQ_1005_P_MI	Minor	RPW	P	FW2-TM	150	4	0.005	0.005	6/16- 9/30	HDD	000-03-01-212
107.5	Mercer	40.3299289	-74.8666559	Fiddlers Creek UNT	S-SUR-198	Minor	RPW	P	FW2-TM	150	5	0.01	0.006	6/16- 9/30	Dry Crossing	000-03-01-215
107.8	Mercer	40.3290535	-74.8604511	Fiddlers Creek UNT	S-SUR-199	Minor	RPW	P	FW2-TM	150	5	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-216
108.3	Mercer	40.3267563	-74.8516454	Fiddlers Creek	NJ-NHD-200	Minor	RPW	I	FW2-TM	150	5	0.009	0.006	6/16- 9/30	Dry Crossing	000-03-01-217
109.1	Mercer	40.3256055	-74.8370646	Jacobs Creek	061015_SQ_1007_P_IN	Intermediate	RPW	P	FW2-NT	50	18	0.042	0.028	7/1-9/30	Dry Crossing	000-03-01-219
109.5	Mercer	40.323471	-74.8302034	Jacobs Creek UNT	061015_SQ_1001_I_MI	Minor	RPW	I	FW2-NT	50	2	0.004	0.003	7/1-9/30	Dry Crossing	000-03-01-220
110.2	Mercer	40.3157134	-74.8230795	Woolsey Brook UNT	NJ-NHD-203	Minor	RPW	P	FW2-NT	50	5	0.009	0.006	7/1-9/30	Dry Crossing	000-03-01-221

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
110.5	Mercer	40.3124626	-74.8197328	Woolsey Brook	NJ-NHD-204	Minor	RPW	P	FW2-NT	50	5	0.006	0.006	7/1-9/30	HDD	000-03-01-221
110.8	Mercer	40.3083057	-74.8159102	Woolsey Brook UNT	NJ-NHD-032	Major	N/A	POND	FW2-NT	50	164	0.187	0.187	7/1-9/30	HDD	000-03-01-222
112.8	Mercer	40.3076278	-74.7834218	Stony Brook UNT	NJ-NHD-207	Intermediate	RPW	P	FW2-NT	50	10	0.015	0.013	7/1-9/30	Dry Crossing	000-03-01-227
112.8	Mercer	40.307528	-74.7838101	Stony Brook UNT	061115_SQ_1005_P_MI	Intermediate	RPW	P	FW2-NT	50	10	0.002	0.001	7/1-9/30	Dry Crossing	000-03-01-227
113.4	Mercer	40.3158231	-74.7781039	Stony Brook UNT	NJ-NHD-209	Minor	RPW	P	FW2-NT	50	7	0.005	0.005	7/1-9/30	Dry Crossing	000-03-01-227.1
113.4	Mercer	40.315856	-74.7781394	UNK	082115_SQ_1001_SOW	Intermediate	RPW	P	N/A	50	18	0.004	0.004	6/1-11/30	Dry Crossing	000-03-01-227.1
113.4	Mercer	40.3158207	-74.7781871	Stony Brook UNT	082115_SQ_1002_P_MI	Minor	RPW	P	FW2-NT	50	2	0.002	0.002	7/1-9/30	Dry Crossing	000-03-01-227.1
113.4	Mercer	40.3158566	-74.7782617	Stony Brook UNT	061615_SQ_1003_P_MI	Minor	RPW	P	FW2-NT	50	2	0	0	7/1-9/30	Dry Crossing	000-03-01-227.1
114	Mercer	40.3159131	-74.7688482	Stony Brook UNT	S-SUR-210	Minor	RPW	P	FW2-NT	150	5	0.009	0	7/1-9/30	Dry Crossing	000-03-01-228

Table G-6

Waterbodies Crossed by the Project in New Jersey

Facility/ Mile Post	County	Latitude (dd nad83) a/	Longitude (dd nad83) a/	Waterbody Name b/	Waterbody ID c/	FERC Class d/	Waters Types e/	Stream Type f/	NJDEP Water Quality Class g/	Regulated Riparian Zone h/	Crossing Width i/	Acres Affected		Instream Construction Period j/	Proposed Crossing Method k/	Alignment Sheet, Plan Sheet, or Figure #
												Cons. ROW	Perm. ROW			
Gilbert Lateral – Delaware River Basin																
	Hunterdon	(None)														
Lambertville 36-inch Lateral – Delaware River Basin																
0.4	Hunterdon	40.3924069	-74.9276465	Alexauken Creek UNT	NJ-NHD-183	Minor	RPW	P	FW2-TMC1	300	5	0.006	0.006	6/16- 9/30	Dry Crossing	000-03-01-236
0.8	Hunterdon	40.3965717	-74.9215584	Alexauken Creek UNT	NJ-NHD-179	Minor	RPW	P	FW2-TMC1	300	5	0.006	0.006	6/16- 9/30	Dry Crossing	000-03-01-237
										Total	**1899**	**2.614**	**2.018**			

Key:
TNW = Traditional Navigable Waters, including territorial seas
NA = Non-Jurisdictional Waters; waters are exclusively regulated by NJDEP per New Jersey Administrative Code 7:13.
P = Perennial, I = Intermittent, E = Ephemeral
a/ Latitude and Longitude are in Decimal Degrees (dd) North American Datum (nad83).

b/ USGS National Hydrology Database (NHD) Data (USGS, 2014), New Jersey Surface Water Quality Standards (NJDEP 2010).
a = Delineated waterbody; b = Designates partial waterbody delineations at time of writing due to route realignment

c/ USGS National Hydrology Database (NHD) Data (USGS, 2014), New Jersey Surface Water Quality Standards (NJDEP 2010).
Waterbody IDs were generated during field delineation or were assigned based on GIS data (NHD or SWQS) to the closest northern milepost.

d/ Wetland and Waterbody Construction and Mitigation Procedures (FERC, 2013).
FERC classifies waterbodies as any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as ponds and lakes: "minor waterbody" (Minor) includes all waterbodies less than or equal to 10 feet wide at the water's edge at the time of crossing; "intermediate waterbody" (Intermediate) includes all waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the water's edge at the time of crossing; and "major waterbody" (Major) includes all waterbodies greater than 100 feet wide at the water's edge at the time of crossing. FERC Classifications for NHD waterbodies were determined by measuring the distance of the waterbody at the crossing point using aerial photographs. If the stream was not visible on the aerial photograph the stream was designated as minor, with a crossing distance of "<10" feet. Classification may change based on conditions at time of construction.

e/ Section 10 waters per Army Corps of Engineers Data (USACE, 2010), Section 404 Guidelines (USACE, 2011).
a = TNW also refers to Section 10 waters per Army Corps of Engineers data; all other waterbodies fall under Section 404 guidelines (USACE, 2010; USACE, 2011)

f/ USGS National Hydrology Database (NHD) Data (USGS, 2014).
For delineated streams, perennial/intermittent/ephemeral determinations were made based on channel definition, i.e., having a defined bed and bank, and, as directed by PADEP (Mackowski, personal comm. 2012), by determination of stream flow using geomorphic, hydrological and biological indicators, utilizing the North Carolina Division of Water Quality (2005) identification methods as guidelines. For NHD waterbodies, perennial/intermittent/ephemeral designations were assigned in the NHD data layer.

g/ New Jersey Surface Water Quality Standards (NJDEP 2010).
Delaware River Designation per Delaware River Basin Commission, (DRBC, 2015)

FW2-NTC1 = Freshwater, non-trout, C- 1
FW2-TMC1 = Freshwater , trout-maintenance, C-1
FW2-TPC1 = Freshwater, trout-production, C- 1
FW2-NTC2 = Freshwater, non-trout ,C-2
FW2-NT = Freshwater, non-trout
FW2-TM = Freshwater, trout-maintenance

h/ Per New Jersey Administrative Code 7:13-10.2. Regulated Riparian Zones are:
-300 feet along Category 1 streams and their tributaries within the same USGS HUC-14 watershed

-150 feet along trout production waters and all upstream tributaries; trout maintenance waters and tributaries within one mile upstream; waters flowing through an area containing documented habitat for a threatened or endangered species of plant or animal, which is critically dependent on the regulated water for survival (and tributaries within one mile upstream); and waters that flow through an area that contains acid producing soils
-50 feet along all other streams

i/ Crossing width based on waters at time of delineation or aerial photography for NHD waters and may vary at time of construction.
a = Total crossing width between Pennsylvania and New Jersey.

j/ Per FERC Guidelines, or State restrictions where more strict – see Resource Report 3

k/ Dry crossing methods include: 1) Flumed Crossing and 2) Dam and Pump Crossing; Modified Dry crossing method (Mainline crew completes trenching using Flumed or Dam and Pump method, then flume is installed; lowering-in crew removes flume and completes lowering-in of pipe and backfilling of waterbody using Flumed or Dam and Pump Method); Wet crossing method or Open Cut Crossing (trenching and backfilling in the waterbody-not including blasting or other rock breaking measures-is complete within 24 hours).

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/
PennEast Mainline Route Pipeline - Upper Susquehanna River Basin c/					
0.6	092414_GO_1001_P_IM	Trout Brook	CWF, MF	III	Bore
1.4	PA-NHD-002	UNT to Trout Brook	CWF, MF	III	Dry Crossing
2.1	S-SUR-003	UNT to Abrahams Creek	CWF, MF	-	Dry Crossing
2.6	011815_JC_1000_I_MI	UNT to Abrahams Creek	CWF, MF	-	Dry Crossing
3.1	011815_JC_1001_P_MI	UNT to Toby Creek	CWF, MF	III	Dry Crossing
3.1	011815_JC_1002_I_MI	UNT to Toby Creek	CWF, MF	III	Dry Crossing
3.5	S-SUR-005	UNT to Abrahams Creek	CWF, MF	-	Dry Crossing
4.3	111814_JC_1002_E_MI	UNT to Abrahams Creek	CWF, MF	III	Dry Crossing
4.6	S-SUR-008	UNT to Abrahams Creek	CWF, MF	III	Dry Crossing
5	093014_DY_1004_E_IM	UNT to Abrahams Creek	CWF, MF	III	Dry Crossing
5.9	092314_GO_1001_I_MI	UNT to Abrahams Creek	CWF, MF	-	Bore
6	092414_GO_1002_D_MI	UNT to Abrahams Creek	CWF, MF	-	Dry Crossing
6.3	092414_GO_1003_P_IM	UNT to Susquehanna River	CWF, MF	-	Dry Crossing
6.5	110915_WA_1002_E_MI	UNT to Susquehanna River	CWF, MF	-	Dry Crossing
7	102315_WA_1001_P_MA	Susquehanna River	WWF, MF	-	Dry Crossing
8.3	043015_JC_1002_D_MI	UNT to Susquehanna River	WWF, MF	-	Dry Crossing
9.8	PA-NHD-015	Gardner Creek	CWF, MF	-	Dry Crossing
10.9	PA-NHD-016	Mill Creek	CWF, MF	III	Dry Crossing
11.3	PA-NHD-123	UNT to Deep Creek	CWF, MF	III	Bore
11.5	121614_JC_1000_P_MI	Deep Creek	CWF, MF	III	Dry Crossing
11.6	121614_JC_1001_E_MI	UNT to Deep Creek	CWF, MF	III	Dry Crossing
12.7	121514_JC_1001_D_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13	121814_JC_1010_P_MI	UNT to Mill Creek	CWF, MF	III	Bore
13.1	121814_JC_1011_P_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.1	121814_JC_1013_E_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.2	121814_JC_1012_E_MI	UNT to Mill Creek	CWF, MF	III	Bore
13.3	121814_JC_1007_D_MI	UNT to Mill Creek	CWF, MF	III	Bore
13.3	121814_JC_1008_P_MI	UNT to Mill Creek	CWF, MF	III	Bore
13.3, AR-029	081215_MK_017_P_IM	UNT to Mill Creek	CWF, MF	III	N/A
13.3, AR-029	081215_MK_016_E_MI	UNT to Mill Creek	CWF, MF	III	N/A

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/
13.3, AR-029	081215_MK_015_I_MI	UNT to Mill Creek	CWF, MF	III	N/A
13.3, AR-029	081215_MK_014_P_IM	UNT to Mill Creek	CWF, MF	III	N/A
13.3, AR-029	081215_MK_013_I_MI	UNT to Mill Creek	CWF, MF	III	N/A
13.6	121814_JC_1005_P_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.6	121814_JC_1006_I_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.7	121814_JC_1004_I_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.8	121814_JC_1003_I_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.9	121814_JC_1002_P_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
13.9	121814_JC_1001_P_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
14.1	111014_JC_1001_I_MI	UNT to Mill Creek	CWF, MF	III	Dry Crossing
PennEast Mainline Route Pipeline - Delaware River Basin					
14.7	S-SUR-025	UNT to Little Bear Creek	HQ-CWF, MF	-	Dry Crossing
15	043015_JC_1001_I_MI	UNT to Little Bear Creek	HQ-CWF, MF	-	Dry Crossing
16.2	112114_JC_1003_P_IM	UNT to Bear Creek	HQ-CWF, MF	-	Dry Crossing
16.2	112114_JC_1002_P_MI	Bear Creek	HQ-CWF, MF	-	Dry Crossing
16.4	112114_JC_1001_P_MI	UNT to Bear Creek	HQ-CWF, MF	-	Dry Crossing
16.6, AR-031	081215_MK_018_P_MI	UNT Meadow Run	HQ-CWF, MF	-	N/A
16.6, AR-031	081315_MK_020_I_MI	UNT Meadow Run	HQ-CWF, MF	-	N/A
16.6, AR-031	081315_MK_021_P_IN	UNT Meadow Run	HQ-CWF, MF	-	N/A
16.6, AR-031	081415_MK_023_P_IN	Meadow Run	HQ-CWF, MF	-	N/A
16.6, AR-031	081415_MK_024_P_MI	UNT Meadow Run	HQ-CWF, MF	-	N/A
16.6, AR-031	081415_MK_025_I_MI	UNT Meadow Run	HQ-CWF, MF	-	N/A
16.7	112014_JC_1003_P_IM	Meadow Run	HQ-CWF, MF	-	Dry Crossing
16.9	112014_JC_1002_P_MI	UNT Meadow Run	HQ-CWF, MF	-	Dry Crossing
17.7	112014_JC_1001_P_MI	UNT to Little Shades Creek	HQ-CWF, MF	III	Dry Crossing
18.3	111914_JC_1002_P_IM	Little Shades Creek	HQ-CWF, MF	III	Dry Crossing
18.4	111914_JC_1001_P_IM	UNT to Little Shades Creek	HQ-CWF, MF	III	Dry Crossing
19	121814_JC_1014_D_MI	UNT to Little Shades Creeka	HQ-CWF, MF	III	Dry Crossing
19.1	121814_JC_1014_I_MI	UNT to Little Shades Creek	HQ-CWF, MF	III	Dry Crossing
19.6	121614_JC_1009_P_IM	Shades Creek	HQ-CWF, MF	I, III	Dry Crossing
20	121714_JC_1001_E_MI	UNT to Shades Creek	HQ-CWF, MF	III	Dry Crossing

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/
20.1	121614_JC_1006_P_MI	UNT to Shades Creek	HQ-CWF, MF	III	Dry Crossing
21.2	121614_JC_1004_I_MI	UNT to Stony Run	HQ-CWF, MF	III	Dry Crossing
21.8, AR-033	PA-NHD-039	Stony Run	HQ-CWF, MF	III	N/A
22.6	102115_WA_002_E_MI	UNT Stony Run	HQ-CWF, MF	III	Dry Crossing
22.6	102115_WA_001_E_MI	UNT Stony Run	HQ-CWF, MF	III	Dry Crossing
22.6	050615_JC_1001_P_IM	Stony Run	HQ-CWF, MF	III	Dry Crossing
22.7	102115_WA_001_I_MI	UNT Stony Run	HQ-CWF, MF	III	Dry Crossing
23	052115_JC_1001_P_MA	Lehigh River	HQ-CWF, MF	III	Dry Crossing
25.0, AR-034	PA-NHD-040	UNT to Lehigh River	HQ-CWF, MF	III	N/A
25.4, AR-034A	012116_DB_1003_I_MI	UNT to Porter Run	HQ-CWF, MF	-	N/A
25.4, AR-034A	012116_DB_1001_P_IN (1)	Porter Run	HQ-CWF, MF	-	N/A
25.4, AR-034B	012116_DB_1001_P_IN (2)	Porter Run	HQ-CWF, MF	-	N/A
26.6	102114_JC_1001_P_MI	UNT to Black Creek	HQ-CWF, MF	III	Dry Crossing
27.3	102314_JC_1001_P_MI	UNT to Black Creek	HQ-CWF, MF	III	Dry Crossing
30.3	042415_JC_1006_E_MI	UNT to Hawk Run	HQ-CWF, MF	III	Dry Crossing
30.9	042415_JC_1002_P_IN (1)	UNT to Laurel Run	HQ-CWF, MF	III	Dry Crossing
31.1	042415_JC_1005_D_MI	UNT to Laurel Run	HQ-CWF, MF	III	Dry Crossing
31.1	042415_JC_1002_P_IN (2)	Laurel Run	HQ-CWF, MF	III	Dry Crossing
31.1	042415_JC_1004_P_MI	UNT to Laurel Run	HQ-CWF, MF	III	Dry Crossing
32.7, AR-038	S-SUR-044	UNT to Mud Run	HQ-CWF, MF	III	N/A
33.1	042115_JC_1001_P_IM	Mud Run	HQ-CWF, MF	III	Dry Crossing
33.1	042115_JC_1002_P_MI	UNT to Mud Run	HQ-CWF, MF	III	Dry Crossing
33.3	042115_JC_1004_D_MI	UNT to Mud Runa	HQ-CWF, MF	III	Dry Crossing
33.3	042115_JC_1005_E_MI	UNT to Mud Run	HQ-CWF, MF	III	Dry Crossing
34.6	042315_JC_1002_P_MI	UNT to Stony Creek	EV, MF	III	Dry Crossing
34.7	042315_JC_1003_P_IN	Stony Creek	EV, MF	III	Dry Crossing
36.1	PA-NHD-049	Yellow Run	EV, MF	III	Dry Crossing
37.5	061615_DB_1001_I_MI	UNT to Wild Creek	EV, MF	III	Dry Crossing
38.3	061615_DB_1002_P_IN	Wild Creek	EV, MF	III	Dry Crossing
39.5	061615_DB_1003_I_MI	UNT to White Oak Run	EV, MF	III	Dry Crossing
39.6	091714_MK_1005_P_MI (1)	UNT to White Oak Run	EV, MF	III	Dry Crossing

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/
40.1	091714_MK_1005_P_MI (2)	UNT to White Oak Run	EV, MF	III	Dry Crossing
41.1	PA-NHD-060	UNT to White Oak Run	EV, MF	III	Dry Crossing
41.2	PA-NHD-061	UNT to White Oak Run	EV, MF	III	Dry Crossing
41.2	PA-NHD-063	UNT to White Oak Run	EV, MF	III	Dry Crossing
41.3	PA-NHD-062	UNT to White Oak Run	EV, MF	III	Dry Crossing
41.6	PA-NHD-056	White Oak Run	EV, MF	III	Dry Crossing
43.5	052215_JC_1001_LAKE_MA (1)	Wild Creek/ Beltzville	EV, MF	III	HDD
44	052215_JC_1001_LAKE_MA (2)	Pohopoco Creek/Beltzville Lake	CWF, MF	III	HDD
44.2	061715_DB_1001_I_MI	UNT to Pohopoco Creek	CWF, MF	III	HDD
44.3	122215_DB_1001_P_MI	UNT to Pohopoco Creek	CWF, MF	III	HDD
44.4	122215_DB_1000_I_MI	UNT to Pohopoco Creek	CWF, MF	III	N/A
44.4	122215_DB_1001_I_MI	UNT to Pohopoco Creek	CWF, MF	III	N/A
44.8	PA-NHD-070	UNT to Hunter Creek	HQ-CWF, MF	III	Dry Crossing
45.0, AR-046	081715_MK_026_P_MI	UNT to Hunter Creek	HQ-CWF, MF	III	N/A
45.1	051115_JC_1002_P_MI	UNT to Hunter Creek	HQ-CWF, MF	III	Dry Crossing
45.6	051115_JC_1001_P_MI	UNT to Hunter Creek	HQ-CWF, MF	III	Dry Crossing
48.1	090914_WA_1000_P_IM	Buckwha Creek	CWF, MF	III	Dry Crossing
48.6, AR-049	081715_MK_028_E_MI	UNT to Aquashicola Creek	HQ-CWF, MF	III	N/A
48.6, AR-049	081715_MK_029_E_MI	UNT to Aquashicola Creek	HQ-CWF, MF	III	N/A
49.2	072215_JC_1001_P_IM	Aquashicola Creek	HQ-CWF, MF	III	Dry Crossing
52.4	072415_JC_1001_I_MI	UNT to Indian Creek	CWF, MF	III	Dry Crossing
53.3	PA-NHD-080	UNT to Indian Creek	CWF, MF	III	Dry Crossing
53.4	S-SUR-081	UNT to Indian Creek	CWF, MF	III	Dry Crossing
53.4	S-SUR-082	UNT to Indian Creek	CWF, MF	III	Dry Crossing
53.5	S-SUR-083	UNT to Indian Creek	CWF, MF	III	Dry Crossing
54.3	PA-NHD-084	Indian Creek	CWF, MF	III	Dry Crossing
55.7	102815_WA_1001_E_MI	UNT to Hokendauqua Creek	CWF, MF	III	Dry Crossing
55.9	051215_JC_1002_P_IN/ PA-NHD-087	Hokendauqua Creek	CWF, MF	III	Dry Crossing
55.9	051215_JC_1001_D_MI	UNT to Hokendauqua Creek	CWF, MF	III	Dry Crossing
56	051215_JC_1003_D_MI	UNT to Hokendauqua Creek	CWF, MF	III	Bore
56.7	PA-NHD-088	UNT to Hokendauqua Creek	CWF, MF	III	Dry Crossing

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/
58.5	PA-NHD-089	UNT to Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
59	090314_DB_1011_E_MI	UNT to Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
59.2	090414_DB_1012_I_MI	UNT to Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
59.2	090414_DB_1013_I_MI	UNT to Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
60.3	051215_JC_1005_P_IN / PA-NHD-091	Monocacy Creek	HQ-CWF, MF	I, III	Dry Crossing
60.6	090314_DB_1005_E_MI	UNT to Monocacy Creek	HQ-CWF, MF	III	Bore
60.6	090314_DB_1007_E_MI	UNT to Monocacy Creek	HQ-CWF, MF	III	Bore
60.7	090314_DB_1006_I_MI	UNT to Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
61.4	111214_JC_1004_P_IM	East Branch Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
62.3	PA-NHD-094	UNT to East Branch Monocacy Creeka	HQ-CWF, MF	III	Dry Crossing
62.8	051415_JC_1001_I_MI	UNT to East Branch Monocacy Creek	HQ-CWF, MF	III	Bore
63.5	051415_JC_1002_P_IN	UNT to East Branch Monocacy Creek	HQ-CWF, MF	III	Dry Crosing
63.7	051415_JC_1003_D_MI	UNT to East Branch Monocacy Creeka	HQ-CWF, MF	III	Bore
66.9	PA-NHD-098	UNT to Monocacy Creek	HQ-CWF, MF	III	Dry Crossing
70.4	S-SUR-100	UNT to Lehigh River	CWF, MF	-	HDD
70.9	PA-NHD-104	Lehigh Canal	WWF	-	HDD
71.1	PA-NHD-099	Lehigh River	WWF	-	HDD
71.5, AR-072B	081815_MK_030_E_MI	UNT to Lehigh River	WWF	-	N/A
72.1	092614_GO_1001_P_IM	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.2, AR-074	S-SUR-113(1)	UNT to Bull Run	CWF, MF	III	N/A
72.2, AR-074	S-SUR-112	UNT to Bull Run	CWF, MF	III	N/A
72.3	S-SUR-113(2)	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.5	051415_JC_1006_E_MI	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.6	S-SUR-115	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.6	S-SUR-117	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.7	102715_WA_1001_I_MI	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.7	102715_WA_1002_I_MI	UNT to Bull Run	CWF, MF	III	Dry Crossing
72.7	102715_WA_1001_P_MI	UNT to Bull Run	CWF, MF	III	Dry Crossing

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/
72.8	042815_JC_1005_I_MI	UNT to Bull Run	CWF, MF	III	Dry Crossing
73	042815_JC_1001_E_MI	UNT to Bull Run	CWF, MF	III	Dry Crossing
73.6	010615_JC_1004_P_MI	UNT to Frya Run	HQ-CWF, MF	III	Dry Crossing
74.6	091814_MK_1009_P_IM	Frya Run	HQ-CWF, MF	I, III	Dry Crossing
74.9	062415_BT_1002_I_MI	UNT to Frya Run	HQ-CWF, MF	III	Bore
74.9	062415_BT_1001_P_MI	UNT to Frya Run	HQ-CWF, MF	III	Bore
75.7	111314_JC_1002_I_MI	UNT to Cooks Creek	EV, MF	III	Dry Crossing
75.7	111314_JC_1003_E_MI	UNT to Cooks Creek	EV, MF	III	Dry Crossing
75.7	111314_JC_1001_I_MI	UNT to Cooks Creek	EV, MF	III	Dry Crossing
76.2	051515_JC_1004_E_MI	UNT to Delaware River	WWF,MF	-	Dry Crossing
76.5, AR-079	PA-NHD-120	UNT to Cooks Creek	EV, MF	III	N/A
77.6	052915_JC_1002_C_IN	Delaware Canal	WWF,MF	-	HDD
77.6	122315_DB_1001_P_MA	Delaware River	WWF	-	HDD
Compressor Station - Delaware River Basin					
26.6	082515_BT_1001_P_IM	UNT to Black Creek	HQ-CWF, MF	III	N/A
Hellertown Lateral - Delaware River Basin					
0.2	PA-NHD-110	Bull Run	CWF, MF	III	Dry Crossing

Table G-7

Pennsylvania-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID	Waterbody Name	PA Code Ch. 93 Desi.	Wild Trout Waters	Proposed Crossing Method b/

Key:
Pennsylvania Code Ch. 93 Designated Use (Pennsylvania Code 2014.)
EV = Exceptional Value Waters
HQ = High Quality Waters
Surface water that meets one or more to the conditions listed in 93.4b.
CWF = Cold Water Fishes
Maintenance or propagation, or both, to fish species including the family Salmonidae and additional flora and fauna, which are indigenous to a cold water habitat.
WWF = Warm Water Fishes
Maintenance and propagation to fish species and additional flora and fauna, which are indigenous to a warm water habitat.
MF = Migratory Fishes
Passage, maintenance, and propagation to anadromous and catadromous fishes and other fishes, which ascend to flowing waters to complete their life cycle.
[viii] Wild Trout Waters, Natural Reproduction, January 2015 (PFBC, 2015a), Wild Trout Waters (PFBC, 2015b), Class A Waters, December 2013 (PFBC, 2015c).
Wild Trout Waters include:
I = Class A Wild Trout Streams: Streams that support a population to naturally produced trout to sufficient size and abundance to support a long-term and rewarding sport fishery.
II = Wilderness Trout Streams: Wilderness trout stream management is based upon the provision to a wild trout fishing experience in a remote, natural, and unspoiled environment where man's disruptive activities are minimized.
III = Wild Trout Streams: Stream sections supporting naturally reproducing populations to trout. A wild trout stream section is a biological designation that does not determine how it is managed; therefore, these streams may also be stocked with hatchery trout by the Commission.
Note:
a/ Pennsylvania-classified designated waterbodies include High Quality and Exceptional Value Waters, and Waters with Trout Designations.
b/ Dry crossing methods include: 1) Flumed Crossing and 2) Dam and Pump Crossing; Modified Dry crossing method (Mainline crew completes trenching using Flumed or Dam and Pump method, then flume is installed; lowering-in crew removes flume and completes lowering-in of pipe and backfilling of waterbody using Flumed or Dam and Pump Method); Wet crossing method or Open Cut Crossing (trenching and backfilling in the waterbody-not including blasting or other rock breaking measures-is complete within 24 hours).
c/ Susquehanna River crossing includes an additional 23.5 acres of temporary disturbance due to drying of river bed between coffer dams.

Table G-8

New Jersey-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID b/	Waterbody Name c/	NJDEP Water Quality Class d/	Proposed Crossing Method e/
PennEast Mainline - Upper Delaware River Basin				
80.0	NJ-NHD-130	Delaware River UNT	FW2-TPC1	Dry Crossing
80.2	NJ-NHD-131	Delaware River UNT	FW2-NT	Dry Crossing
80.4	NJ-NHD-216	Delaware River UNT	FW2-NT	Dry Crossing
80.7	NJ-NHD-218	Delaware River UNT	FW2-NT	Dry Crossing
80.8	NJ-NHD-220	Delaware River UNT	FW2-NT	Dry Crossing
80.8	NJ-NHD-219	Delaware River UNT	FW2-NT	Dry Crossing
80.8	NJ-NHD-132	Delaware River UNT	FW2-NT	Dry Crossing
81.1	NJ-NHD-133	Delaware River UNT	FW2-NT	Dry Crossing
81.5	NJ-NHD-134	Delaware River UNT	FW2-NT	Dry Crossing
81.7	081215_JFL_1001_P_MI	Delaware River UNT	FW2-NT	Dry Crossing
81.9	081215_SAB_1004_E_MI	Delaware River UNT	FW2-NT	Dry Crossing
82	052015_JC_1001_E_MI	Spring Mills Brook UNT	FW2-TPC1	Dry Crossing
82.4	S-SUR-139	Spring Mills Brook	FW2-TPC1	Dry Crossing
82.4	NJ-NHD-138	Spring Mills Brook	FW2-TPC1	Dry Crossing
82.7	NJ-NHD-140	Spring Mills Brook UNT	FW2-TPC1	Dry Crossing
83.2	NJ-NHD-008	Hakihokake Creek	FW2-TPC1	Bore
83.8	NJ-NHD-142	Hakihokake Creek UNT	FW2-TPC1	Dry Crossing
84.4	S-SUR-144	Delaware River UNT	FW2-NT	Dry Crossing
84.8	NJ-NHD-225	Delaware River UNT	FW2-NT	Dry Crossing
85.4	NJ-NHD-232	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
85.6	NJ-NHD-034	Harihokake Creek	FW2-TMC1	Dry Crossing
85.8	NJ-NHD-245	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
85.9	091014_WA_1004_I_MI	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
86	091014_WA_1015_E_MI	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
86.3	NJ-NHD-037	Harihokake Creek UNT	FW2-TMC1	Dry Crossing

Table G-8

New Jersey-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID b/	Waterbody Name c/	NJDEP Water Quality Class d/	Proposed Crossing Method e/
86.7	NJ-NHD-043	Harihokake Creek	FW2-TMC1	Dry Crossing
87.2	NJ-NHD-154	Delaware River UNT	FW2-NT	Dry Crossing
87.7	091114_WA_1001_P_IM	Nishisakawick Creek	FW2-NTC1	Bore
87.9	051515_SQ_1002_P_IN	Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.4	NJ-NHD-014	Little Nishisakawick Creek	FW2-NTC1	Dry Crossing
88.5	091114_WA_1008_E_MI	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.8	091114_WA_1004_I_MI	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.8	091114_WA_1003_I_MI	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.9	S-SUR-158	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
89.6	NJ-NHD-159	Copper Creek UNT	FW2-NT	Dry Crossing
90.0	NJ-NHD-044	Copper Creek	FW2-NT	Dry Crossing
90.4	NJ-SWQS-01	Copper Creek UNT	FW2-NT	Dry Crossing
91.6	NJ-NHD-248	Lockatong Creek	FW2-NTC1	HDD
92.2	NJ-NHD-018	Lockatong Creek	FW2-NTC1	HDD
92.4	NJ-NHD-162	Lockatong Creek	FW2-NTC1	HDD
93.2	051915_SQ_1001_P_MI	Uncoded Tributary	FW2-NT	Dry Crossing
93.4	NJ-NHD-165	Lockatong Creek UNT	FW2-NTC1	Dry Crossing
94.5	S-SUR-166	Wickecheoke Creek UNT	FW2-NTC1	Dry Crossing
94.6	S-SUR-167	Wickecheoke Creek UNT	FW2-NTC1	Dry Crossing
95.1	NJ-NHD-168	Wickecheoke Creek UNT	FW2-NTC1	Dry Crossing
96.1	NJ-NHD-169	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
96.3	NJ-NHD-170	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
96.7	NJ-NHD-171	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
96.8	NJ-NHD-172	Wickecheoke Creek UNT	FW2-TMC1	Bore
96.8	NJ-NHD-021	Wickecheoke Creek	FW2-TMC1	Dry Crossing
97.3	NJ-NHD-173	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing

Table G-8

New Jersey-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID b/	Waterbody Name c/	NJDEP Water Quality Class d/	Proposed Crossing Method e/
98.5	NJ-NHD-174	Delaware and Raritan Canal UNT	FW2-NT	Dry Crossing
99.6	NJ-NHD-176	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.0	NJ-NHD-177A	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.0	NJ-NHD-177B	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.1	NJ-NHD-178	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.4	NJ-NHD-024	Alexauken Creek	FW2-TMC1	Dry Crossing
100.9	052915_SQ_1001_E_MI	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
101	S-SUR-184	Alexauken Creek UNT	FW2-NTC1	Dry Crossing
101.3	052815_SQ_1001_P_MI	Swan Creek UNT	FW2-NT	Dry Crossing
101.9	NJ-NHD-186	Swan Creek UNT	FW2-NT	Dry Crossing
102.1	080515_SQ_1003_E_MI	Swan Creek UNT	FW2-NT	Dry Crossing
102.1	080515_SQ_1004_E_MI	Swan Creek UNT	FW2-NT	Dry Crossing
102.8	NJ-NHD-189	Lambertville Lower Reservoir	FW2-NT	Dry Crossing
102.8	NJ-NHD-188	Swan Creek UNT	FW2-NT	Dry Crossing
102.9	NJ-NHD-191	Swan Creek UNT	FW2-NT	Dry Crossing
104.6	S-SUR-194	Moores Creek UNT	FW2-TM	Bore
104.8	NJ-NHD-195	Moores Creek UNT	FW2-TM	Dry Crossing
105.3	060315_SQ_1005_P_MI	Moores Creek UNT	FW2-TM	Dry Crossing
105.7	060415_SQ_1003_P_IN	Moores Creek	FW2-TM	HDD
105.9	060415_SQ_1005_P_MI	Moores Creek UNT	FW2-TM	HDD
107.5	S-SUR-198	Fiddlers Creek UNT	FW2-TM	Dry Crossing
107.8	S-SUR-199	Fiddlers Creek UNT	FW2-TM	Dry Crossing
108.3	NJ-NHD-200	Fiddlers Creek	FW2-TM	Dry Crossing
109.1	061015_SQ_1007_P_IN	Jacobs Creek	FW2-NT	Dry Crossing
109.5	061015_SQ_1001_I_MI	Jacobs Creek UNT	FW2-NT	Dry Crossing
110.2	NJ-NHD-203	Woolsey Brook UNT	FW2-NT	Dry Crossing

Table G-8

New Jersey-Classified Designated Waterbodies Crossed by the Project a/

Facility/ Mile Post	Waterbody ID b/	Waterbody Name c/	NJDEP Water Quality Class d/	Proposed Crossing Method e/
110.5	NJ-NHD-204	Woolsey Brook	FW2-NT	HDD
110.8	NJ-NHD-032	Woolsey Brook UNT	FW2-NT	HDD
112.8	NJ-NHD-207	Stony Brook UNT	FW2-NT	Dry Crossing
112.8	061115_SQ_1005_P_MI	Stony Brook UNT	FW2-NT	Dry Crossing
113.4	NJ-NHD-209	Stony Brook UNT	FW2-NT	Dry Crossing
113.4	082115_SQ_1002_P_MI	Stony Brook UNT	FW2-NT	Dry Crossing
113.4	061615_SQ_1003_P_MI	Stony Brook UNT	FW2-NT	Dry Crossing
114	S-SUR-210	Stony Brook UNT	FW2-NT	Dry Crossing
Gilbertville Lateral - Delaware River Basin				
None				
Lambertville Lateral - Delaware River Basin				
0.4	NJ-NHD-183	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
0.8	NJ-NHD-179	Alexauken Creek UNT	FW2-TMC1	Dry Crossing

Key:
NA = Non-Jurisdictional Waters; waters are exclusively regulated by NJDEP per New Jersey Administrative Code 7:13.
Notes:
a/ New Jersey-classified designated waterbodies include Freshwater and Trout Designation Waters.
b/ USGS National Hydrology Database (NHD) Data (USGS, 2014), New Jersey Surface Water Quality Standards (NJDEP 2010).
c/ USGS National Hydrology Database (NHD) Data (USGS, 2014), New Jersey Surface Water Quality Standards (NJDEP 2010).
Waterbody IDs were generated during field delineation or were assigned based on GIS data (NHD or SWQS) to the closest northern milepost.
d/ New Jersey Surface Water Quality Standards (NJDEP 2010).
Delaware River Designation per Delaware River Basin Commission, (DRBC, 2015)
FW = Freshwater
TM = Trout Maintenance
C1 = Category 1
NT = Non-trout Waters
e/ Dry crossing methods include: 1) Flumed Crossing and 2) Dam and Pump Crossing; Modified Dry crossing method (Mainline crew completes trenching using Flumed or Dam and Pump method, then flume is installed; lowering-in crew removes flume and completes lowering-in of pipe and backfilling of waterbody using Flumed or Dam and Pump Method); Wet crossing method or Open Cut Crossing (trenching and backfilling in the waterbody-not including blasting or other rock breaking measures-is complete within 24 hours).

Table G-9

Designated Category 1 Waters Crossed by the Project in New Jersey

Facility/Mile Post	Waterbody ID a/	Waterbody Name b/	NJDEP Water Quality Class c/	Proposed Crossing Method d/
PennEast Mainline - Upper Delaware River Basin				
80.0	NJ-NHD-130	Delaware River UNT	FW2-TPC1	Dry Crossing
82	052015_JC_1001_E_MI	Spring Mills Brook UNT	FW2-TPC1	Dry Crossing
82.4	S-SUR-139	Spring Mills Brook	FW2-TPC1	Dry Crossing
82.4	NJ-NHD-138	Spring Mills Brook	FW2-TPC1	Dry Crossing
82.7	NJ-NHD-140	Spring Mills Brook UNT	FW2-TPC1	Dry Crossing
83.2	NJ-NHD-008	Hakihokake Creek	FW2-TPC1	Bore
83.8	NJ-NHD-142	Hakihokake Creek UNT	FW2-TPC1	Dry Crossing
85.4	NJ-NHD-232	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
85.6	NJ-NHD-034	Harihokake Creek	FW2-TMC1	Dry Crossing
85.8	NJ-NHD-245	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
85.9	091014_WA_1004_I_MI	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
86	091014_WA_1015_E_MI	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
86.3	NJ-NHD-037	Harihokake Creek UNT	FW2-TMC1	Dry Crossing
86.7	NJ-NHD-043	Harihokake Creek	FW2-TMC1	Dry Crossing
87.7	091114_WA_1001_P_IM	Nishisakawick Creek	FW2-NTC1	Bore
87.9	051515_SQ_1002_P_IN	Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.4	NJ-NHD-014	Little Nishisakawick Creek	FW2-NTC1	Dry Crossing
88.5	091114_WA_1008_E_MI	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.8	091114_WA_1004_I_MI	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.8	091114_WA_1003_I_MI	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
88.9	S-SUR-158	Little Nishisakawick Creek UNT	FW2-NTC1	Dry Crossing
91.6	NJ-NHD-248	Lockatong Creek	FW2-NTC1	HDD
92.2	NJ-NHD-018	Lockatong Creek	FW2-NTC1	HDD
92.4	NJ-NHD-162	Lockatong Creek	FW2-NTC1	HDD
93.4	NJ-NHD-165	Lockatong Creek UNT	FW2-NTC1	Dry Crossing
94.5	S-SUR-166	Wickecheoke Creek UNT	FW2-NTC1	Dry Crossing

Table G-9

Designated Category 1 Waters Crossed by the Project in New Jersey

Facility/Mile Post	Waterbody ID a/	Waterbody Name b/	NJDEP Water Quality Class c/	Proposed Crossing Method d/
94.6	S-SUR-167	Wickecheoke Creek UNT	FW2-NTC1	Dry Crossing
95.1	NJ-NHD-168	Wickecheoke Creek UNT	FW2-NTC1	Dry Crossing
96.1	NJ-NHD-169	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
96.3	NJ-NHD-170	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
96.7	NJ-NHD-171	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
96.8	NJ-NHD-172	Wickecheoke Creek UNT	FW2-TMC1	Bore
96.8	NJ-NHD-021	Wickecheoke Creek	FW2-TMC1	Dry Crossing
97.3	NJ-NHD-173	Wickecheoke Creek UNT	FW2-TMC1	Dry Crossing
99.6	NJ-NHD-176	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.0	NJ-NHD-177A	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.0	NJ-NHD-177B	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.1	NJ-NHD-178	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
100.4	NJ-NHD-024	Alexauken Creek	FW2-TMC1	Dry Crossing
100.9	052915_SQ_1001_E_MI	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
101.0	S-SUR-184	Alexauken Creek UNT	FW2-NTC1	Dry Crossing

Table G-9

Designated Category 1 Waters Crossed by the Project in New Jersey

Facility/Mile Post	Waterbody ID a/	Waterbody Name b/	NJDEP Water Quality Class c/	Proposed Crossing Method d/
Gilbertville Lateral - Delaware River Basin				
None				
Lambertville Lateral - Delaware River Basin				
0.4	NJ-NHD-183	Alexauken Creek UNT	FW2-TMC1	Dry Crossing
0.8	NJ-NHD-179	Alexauken Creek UNT	FW2-TMC1	Dry Crossing

Key:
NA = Non-Jurisdictional Waters; waters are exclusively regulated by NJDEP per New Jersey Administrative Code 7:13.
Notes:
a/ USGS National Hydrology Database (NHD) Data (USGS, 2014), New Jersey Surface Water Quality Standards (NJDEP 2010).
b/ USGS National Hydrology Database (NHD) Data (USGS, 2014), New Jersey Surface Water Quality Standards (NJDEP 2010).
Waterbody IDs were generated during field delineation or were assigned based on GIS data (NHD or SWQS) to the closest northern milepost.
c/ New Jersey Surface Water Quality Standards (NJDEP 2010).
Delaware River Designation per Delaware River Basin Commission, (DRBC, 2015)
FW2-NTC1 = Freshwater, non-trout, C- 1
FW2-TMC1 = Freshwater , trout-maintenance, C-1
FW2-TPC1 = Freshwater, trout-production, C- 1
FW2-NTC2 = Freshwater, non-trout ,C-2
FW2-NT = Freshwater, non-trout
FW2-TM = Freshwater , trout-maintenance
d/ Dry crossing methods include: 1) Flumed Crossing and 2) Dam and Pump Crossing; Modified Dry crossing method (Mainline crew completes trenching using Flumed or Dam and Pump method, then flume is installed; lowering-in crew removes flume and completes lowering-in of pipe and backfilling of waterbody using Flumed or Dam and Pump Method); Wet crossing method or Open Cut Crossing (trenching and backfilling in the waterbody-not including blasting or other rock breaking measures-is complete within 24 hours).

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Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
0.6	ATWS-0007	092414_GO_1001_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Lower Demunds Road
0.6	ATWS-0008	092414_GO_1001_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Lower Demunds Road
2.1	ATWS-0026	S-SUR-003	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Green Road
2.6	ATWS-0031	011815_JC_1000_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and side slope
3.1	ATWS-0039	011815_JC_1000_I_M	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required to support crossing of wetland on opposite side of workspace
4.3	ATWS-0051	111814_JC_1002_E_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS is located in agricultural field for topsoil segregation in agricultural area and to support stream crossing
5.0	ATWS-0059	093014_DY_1004_E_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
5.0	ATWS-0060	093014_DY_1004_E_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
5.0	ATWS-0061	093014_DY_1004_E_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
5.1	ATWS-0062	093014_DY_1004_E_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
6.0	ATWS-0074	PA-NHD-012	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of Swetland Lane.
6.2	ATWS-0078	092414_GO_1003_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and topsoil segregation
6.5	ATWS-0085	110915_WA_1002_E_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS is located in agricultural field for topsoil segregation in agricultural area and to support stream crossing
6.5	ATWS-0085	110915_WA_003_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS is located in agricultural field for topsoil segregation in agricultural area and to support stream crossing
6.5	ATWS-0085	110915_WA_002_PEM	Wetland	Surveyed	ATWS within 50 feet of weltand	ATWS is located in agricultural field for topsoil segregation in agricultural area and to support stream crossing
6.5	ATWS-0085	110915_WA_001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS is located in agricultural field for topsoil segregation in agricultural area and to support stream crossing
6.9	ATWS-0088	PA-NHD-001	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of Susquehanna River
6.9	ATWS-1110	PA-NHD-001	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of Susquehanna River
6.9	ATWS-1111	PA-NHD-001	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of Susquehanna River

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
8.4	ATWS-0102	043015_JC_1002_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream
11.3	ATWS-1160	PA-NHD-123	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream
12.7	ATWS-0149	121514_JC_1001_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream
12.2	ATWS-1174	121514_JC_1001_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream, steep slopes, and gravel road crossing
12.8	ATWS-0149	121514_JC_1001_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream, steep slopes, and gravel road crossing
13.0	ATWS-0152	121514_JC_1010_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and PA State Route 2039
13.0	ATWS-0153	121514_JC_1010_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and PA State Route 2039
13.1	ATWS-0154	121514_JC_1010_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and subsoil segregation
13.1	ATWS-0155	121514_JC_1010_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and subsoil segregation
13.1	ATWS-0155	121814_JC_004_PSS	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing 121814_JC_1010_P_MI
13.2	ATWS-0157	1218114_JC_1012_E_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for horizontal bored crossing of Interstate 476
13.3	ATWS-0158	121814_JC_1007_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for horizontal bored crossing of Interstate 476
13.3	ATWS-0159	121814_JC_1007_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for horizontal bored crossing of Interstate 476
13.3	ATWS-0160	121814_JC_1007_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for horizontal bored crossing of Interstate 476 and stream crossing
13.3	ATWS-0161	121814_JC_002_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for horizontal bored crossing of Interstate 476 and stream crossing
13.6	ATWS-0163	121814_JC_1006_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
13.6	ATWS-0163	121814_JC_1004_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
13.7	ATWS-0164	121814_JC_1004_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
13.7	ATWS-0164	121814_JC_001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
13.7	ATWS-0165	121814_JC_001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
13.9	ATWS-0166	121814_JC_1002_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
13.9	ATWS-0166	121814_JC_1001_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
13.9	ATWS-0167	121814_JC_1001_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
14.1	ATWS-0168	111014_JC_002_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
14.1	ATWS-0169	111014_JC_002_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
16.0	ATWS-0177	112114_JC_003B_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
16.2	ATWS-0178	112114_JC_1002_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
16.2	ATWS-0178	112114_JC_003A_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
16.4	ATWS-0179	112114_JC_002_PSS	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
16.6	ATWS-0183	112014_JC_1003_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
16.7	ATWS-0184	112014_JC_1003_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
16.8	ATWS-0185	112014_JC_002_PF	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes
17.7	ATWS-0189	112014_JC_001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and PA State Route 2038
20.2	ATWS-0202	121614_JC_1006_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
22.8	ATWS-0211	Lehigh River	River	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of river and steep slopes on both sides of river
23.1	ATWS-0212	Lehigh River	River	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of river and steep slopes on both sides of river
24.3	ATWS-0214	110614_JC_004_PF	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
26.7	ATWS-0225	102114_JC_001A_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for horizontal bored crossing of Interstate 80
26.9	ATWS-0226	102314_JC_002_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for horizontal bored crossing of Interstate 80
29.4	ATWS-0233	050115_JC_1001_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
32.7	ATWS-0245	S-SUR-044	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of wetland and steep slopes
33.0	ATWS-0246	042115_JC_1001_P_I	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of wetland, stream, and steep slopes
33.1	ATWS-0247	042115_JC_1001_PSS	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland, stream, and steep slopes
33.7	ATWS-0250	042115_JC_1003_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and steep slopes

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
35.3	ATWS-0255	042315_JC_1004_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
35.4	ATWS-0257	042315_JC_1004_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
36.6	ATWS-0270	050615_JC_1001_PFO	Wetland	Surveyed	ATWS within a wetland	ATWS required for excavated material storage
36.6	ATWS-0271	050615_JC_1001_PFO	Wetland	Surveyed	ATWS within a wetland	ATWS required for excavated material storage
37.4	ATWS-0278	061615_DB_1001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage at foreign line crossing
37.5	ATWS-0280	061615_DB_1001_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage at foreign line crossing
38.3	ATWS-0287	061615_DB_1002_P_IN	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
38.3	ATWS-0288	061615_DB_1002_P_IN	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
39.6	ATWS-0291	091714_MK_1005_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
44.4	ATWS-0330	122215_DB_1000_P_MI	Stream	Surveyed	ATWS within a waterbody	ATWS required for HDD staging area for crossing Beltzville Lake
44.4	ATWS-0330	122215_DB_1001_P_MI	Stream	Surveyed	ATWS within a waterbody	ATWS required for HDD staging area for crossing Beltzville Lake
45.0	ATWS-0343	051115_JC_1002_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for PA State Route 2011 crossing
45.0	ATWS-0343	052915_JC_1001_PEM	Wetland	Surveyed	ATWS within a wetland	ATWS required for PA State Route 2011 crossing
45.0	ATWS-0344	052915_JC_1001_PEM	Wetland	Surveyed	ATWS within a wetland	ATWS required for PA State Route 2011 crossing
45.0	ATWS-0344	051115_JC_1002_P_MI	Stream	Surveyed	ATWS within a waterbody	ATWS required for PA State Route 2011 crossing
45.6	ATWS-0352	051115_JC_1001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for Beers Lane and wetland crossing
45.6	ATWS-0353	051115_JC_1001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for Beers Lane and wetland crossing
45.6	ATWS-0354	051115_JC_1001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
48.2	ATWS-0371	090914_WA_002_PSS	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of stream and steep slopes
48.2	ATWS-0372	090914_WA_002_PSS	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of stream and steep slopes
49.0	ATWS-0377	072315_JC_1001_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage - ATWS is located in ag field
49.5	ATWS-0378	081915_MK_043_PUB	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
55.7	ATWS-0429	102815_WA_1001_E_MI	Stream	Surveyed	ATWS within a stream	ATWS required for excavated material storage and crossing of stream.
55.9	ATWS-0431	051215_JC_1002_P_IN	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
55.9	ATWS-0431	051215_JC_1001_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
55.9	ATWS-0432	051215_JC_1003_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Mountain View Drive
56.0	ATWS-0433	NWI-013	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for crossing of Mountain View Drive
56.0	ATWS-0435	NWI-013	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
58.1	ATWS-0460	PA-NHD-089	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage - ATWS is located in ag field
59.2	ATWS-0473	090414_DB_008_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and Hatch Gravel Road
59.2	ATWS-0474	090414_DB_008_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and Hatch Gravel Road
59.3	ATWS-0475	090414_DB_1013_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
59.3	ATWS-0476	090414_DB_1013_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
60.3	ATWS-0478	PA-NHD-091	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and PA State Route 987
60.3	ATWS-0479	PA-NHD-091	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and PA State Route 987
60.6	ATWS-0483	090314_DB_1005_E_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and PA State Route 512
60.6	ATWS-0484	090314_DB_1005_E_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and PA State Route 512
61.4	ATWS-0489	111214_JC_003_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of stream and Penn Dixie Road
61.4	ATWS-0490	111214_JC_1004_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Penn Dixie Road
61.5	ATWS-0491	111214_JC_1004_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Penn Dixie Road
61.5	ATWS-0493	111214_JC_1004_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Penn Dixie Road
62.2	ATWS-500	102715_WA_1002_P_MI	Stream	Surveyed	ATWS within a waterbody	ATWS required for crossing of stream
62.2	ATWS-501	102715_WA_1002_P_MI	Stream	Surveyed	ATWS within a waterbody	ATWS required for crossing of stream
62.2	ATWS-0500	PA-NHD-094	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
62.3	ATWS-0501	PA-NHD-094	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream
62.3	ATWS-0502	PA-NHD-094	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream
62.3	ATWS-0503	PA-NHD-094	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream
62.8	ATWS-0508	051415_JC_1001_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and railroad corridor
62.8	ATWS-0509	051415_JC_1001_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and railroad corridor
62.8	ATWS-0510	051415_JC_1001_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
63.5	ATWS-0512	051415_JC_1002_P_IN	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
63.6	ATWS-0513	051415_JC_1002_P_IN	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
63.6	ATWS-0514	051415_JC_1002_P_IN	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and steep slopes
63.7	ATWS-0517	051415_JC_1003_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Georgetown Road
63.7	ATWS-0518	051415_JC_1003_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Georgetown Road
63.7	ATWS-0519	051415_JC_1003_D_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and Georgetown Road
64.3	ATWS-0526	042815_JC_1003_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and PA State Route 946
66.8	ATWS-0545	PA-NHD-098	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream in ag field
66.9	ATWS-0547	PA-NHD-098	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for crossing of stream in ag field
72.2	ATWS-0601	S-SUR-113	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage - ATWS is located in ag field
72.3	ATWS-0602	S-SUR-112	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage - ATWS is located in ag field
72.7	ATWS-0606	042815_JC_1001_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and side slope
72.9	ATWS-0607	042815_JC_1001_PFO	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and access road template
73.5	ATWS-0615	010615_JC_1004_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and wetland
73.6	ATWS-0617	010615_JC_1004_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for crossing of stream and wetland
74.4	ATWS-0631	091814_MK_1009_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage - ATWS is located in ag field

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
74.6	ATWS-0632	091814_MK_1009_P_IM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage - ATWS is located in ag field
74.9	ATWS-0635	062415_BT_1003_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and Durham Road
74.9	ATWS-0636	062415_BT_1002_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for crossing of wetland and Durham Road
75.7	ATWS-0644	111314_JC_1002_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage and side slope area
80	ATWS-1184	NJDEP-AG-028	Wetland	Public	ATWS within 50 feet of wetland	ATWS is located in agricultural field for topsoil segregation in agricultural area.
80.6	ATWS-1194	NJDEP-AG-033	Wetland	Public	ATWS within a wetland	ATWS is located in agricultural field for topsoil segregation in agricultural area.
80.7	ATWS-1194	NJDEP-AG-034	Wetland	Public	ATWS within a wetland	ATWS is located in agricultural field for topsoil segregation in agricultural area.
80.7	ATWS-1195	NJDEP-AG-034	Wetland	Public	ATWS within a wetland	ATWS is located in agricultural field for topsoil segregation in agricultural area.
80.7	ATWS-1196	NJDEP-AG-034	Wetland	Public	ATWS within a wetland	ATWS is required for excavated material storage and Riegelsville Milford Road crossing
81.6	ATWS-0709	081215_JFL_1003_PEM	Stream	Surveyed	ATWS within 50 feet of stream	ATWS is required for excavated material storage and Spring Garden Road crossing.
81.6	ATWS-0710	081215_JFL_1003_PEM	Stream	Surveyed	ATWS within 50 feet of stream	ATWS is required for excavated material storage and Spring Garden Road crossing
81.7	ATWS-0712	NJDEP-024	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage and Spring Garden Road crossing
82.1	ATWS-0717	052015_JC_1002_E_MI	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage and access road crossing
82.4	ATWS-0720	NJDEP-AG-002	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage and wetland crossing - ATWS is located in ag field
82.4	ATWS-0721	NJDEP-AG-002	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage and wetland crossing - ATWS is located in ag field
82.9	ATWS-0727	NJDEP-AG-003	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage
82.9	ATWS-0728	NJDEP-AG-003	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage and access road entrance - ATWS is located in ag field

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
84.6	ATWS-1212	NJDEP-AG-035	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage
84.9	ATWS-1215	NJDEP-132	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
86.3	ATWS-1231	NJDEP-AG-040	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage and crossing of Gallmeier Road
86.3	ATWS-1232	NJDEP-AG-040	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage and crossing of Gallmeier Road
86.7	ATWS-1259	NJDEP-041	Wetland	Public	ATWS within 50 feet of wetlands	ATWS required for excavated material storage.
86.7	ATWS-1260	NJDEP-041	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
87.4	ATWS-0786	091114_WA_001_PEM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage and Everittstown Road crossing
87.7	ATWS-0787	091114_WA_1001_P_IM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
87.7	ATWS-0788	091114_WA_1001_P_IM	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage
88.8	ATWS-0803	NJDEP-052	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage and Frenchtown Flemington Road crossing
90.6	ATWS-0820	NJDEP-AG-006	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage at wetland crossing - ATWS is located in ag field
90.8	ATWS-0821	NJDEP-AG-006	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage for Kingwood Road crossing - ATWS is located in ag field
90.8	ATWS-0822	NJDEP-AG-006	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage for Kingwood Road crossing - ATWS is located in ag field
91.1	ATWS-0824	NJDEP-AG-009	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
91.3	ATWS-0824	NJDEP-AG-041	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
91.3	ATWS-0824	NJDEP-AG-042	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
91.4	ATWS-1234	NJDEP-AG-009	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage and HDD staging area - ATWS is located in ag field
92.6	ATWS-1235	NJDEP-AG-012	Wetland	Public	ATWS within a wetland	ATWS required for HDD staging area

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
92.8	ATWS-1238	NJDEP-AG-013	Wetland	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage and Kingwood Locktown Road
93.1	ATWS-0847	NJDEP-072	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage and Kingwood Locktown Road
93.4	ATWS-0849	NJDEP-073	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
93.4	ATWS-0849	NJDEP-075	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
93.8	ATWS-0852	NJDEP-077	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
94.3	ATWS-0855	NJDEP-086	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
94.4	ATWS-0856	NJDEP-AG-014	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
94.4	ATWS-0857	NJDEP-AG-014	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
94.5	ATWS-0858	NJDEP-AG-014	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
94.6	ATWS-0859	NJDEP-AG-014	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage at stream crossing - ATWS is located in ag field
94.6	ATWS-0860	NJDEP-AG-014	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage - ATWS is located in ag field
95.1	ATWS-0870	NJDEP-093	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage - ATWS is located in ag field
95.6	ATWS-0880	NJDEP-AG-015	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage - ATWS is located in ag field
96.8	ATWS-0896	NJ-NHD-172	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage and Lower Creek Road crossing
97.5	ATWS-0905	NJDEP-AG-016	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage - ATWS is located in ag field
98.4	ATWS-0918	NJDEP-AG-017	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage at stream crossing
98.4	ATWS-0918	NJ-NHD-177	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage - ATWS is located in ag field
99.6	ATWS-1268	NJDEP-AG-022	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage - ATWS is located in ag field

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Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
99.8	ATWS-1272	NJDEP-AG-014	Wetland	Public	ATWS within 50 feet of waterbody	ATWS required for HDD staging area
101.0	ATWS-0971	NJDEP-AG-020	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage at stream crossing and HDD staging
102.2	ATWS-0989	080515_SQ_1003_E_MI	Stream	Surveyed	ATWS within a stream	ATWS required for excavated material storage at Rocktown Lambertville Road crossing
102.2	ATWS-0989	080515_SQ_1004_E_MI	Stream	Surveyed	ATWS within a stream	ATWS required for excavated material storage at Rocktown Lambertville Road crossing
102.7	ATWS-1279	NJ-NHD-026	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage at paved road crossing
102.8	ATWS-0995	NJDEP-103	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage at paved road crossing
102.8	ATWS-0998	NJ-NHD-191	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage at Brunswick Avenue crossing
102.9	ATWS-0999	NJ-NHD-191	Stream	Public	ATWS within a stream	ATWS required for excavated material storage Old 518 W Road crossing
102.9	ATWS-0999	NJDEP-105	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage Old 518 W Road crossing
102.9	ATWS-1280	NJDEP-105	Wetland	Public	ATWS within a wetland	ATWS required for excavated material storage Old 518 W Road crossing
103.0	ATWS-1281	080515_SQ_1002_P_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage Old 518 W Road crossing
103.0	ATWS-1281	080515_SQ_1001_PFO	Wetland	Surveyed	ATWS within a wetland	ATWS required for excavated material storage Old 518 W Road crossing
104.4	ATWS-1016	S-SUR-194	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage at stream crossing - ATWS is located in ag field
104.6	ATWS-1017	S-SUR-194	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage at stream crossing – ATWS is located in ag field
104.8	ATWS-1284	NJ-NHD-195	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for stream crossing
104.8	ATWS-1022	NJ-NHD-195	Stream	Public	ATWS within 50 feet of waterbody	ATWS is required for stream crossing and top soil segregation
105.3	ATWS-1285	060315_SQ_1006_PEM	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage at stream crossing

Table G-10

Summary of Wetland and Waterbody Crossings – Site Specific Justification for ATWS within 50 feet of Wetlands and Waterbodies

MP	Workspace ID	Feature ID	Feature Type	Survey	Exception to FERC Procedure	Workspace Justification
105.4	ATWS-1029	060415_SQ_1001_PEM	Wetland	Surveyed	ATWS within a wetland	ATWS required for HDD staging area for crossing Pleasant Valley Road - workspace will be matted for HDD drill pad
105.4	ATWS-1030	060415_SQ_1001_PEM	Wetland	Surveyed	ATWS within a wetland	ATWS required for HDD staging area for crossing Pleasant Valley Road - workspace will be matted for HDD drill pad
106.0	ATWS-1031	060415_SQ_1007_PFO	Wetland	Surveyed	ATWS within 50 feet of waterbody	ATWS required for HDD staging area for crossing Pleasant Valley Road
107.4	ATWS-1035	0615_SQ_1001_PEM	Wetland	Surveyed	ATWS within 50 feet of waterbody	ATWS required for change in pipeline direction (PI). ATWS is located inside powerline corridor.
108.1	ATWS-1295	S-SUR-198	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for change in pipeline direction (PI). ATWS is located inside powerline corridor.
108.4	ATWS-1298	060315_SQ_1009_I_MI	Wetland	Surveyed	ATWS within 50 feet of wetland	ATWS required for excavated material storage at Bear Tavern Road
108.4	ATWS-1298	NJDEP-107	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage at Bear Tavern Road
108.8	ATWS-1054	NJDEP-109	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
109.6	ATWS-1303	NJDEP-110	Stream	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage
109.6	ATWS-1303	061015_SQ_1001_I_MI	Stream	Surveyed	ATWS within 50 feet of waterbody	ATWS required for excavated material storage
110.2	ATWS-1306	NJDEP-114	Wetland	Public	ATWS within 50 feet of wetland	ATWS required for excavated material storage
112.2	ATWS-1321	NJ-NHD-050	Wetland	Public	ATWS within 50 feet of waterbody	ATWS required for excavated material storage and top soil segregation- ATWS is located in ag field

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Table G-11

Wetlands Crossed by the Project in Pennsylvania

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/ Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
PennEast Mainline – Upper Susquehanna River Basin							
0.0, AR-001	Luzerne	PEM	284	0.15	0	0	N/A
0.0, AR-001	Luzerne	PSS	243	0.04	0	0	N/A
0.0, AR-001	Luzerne	PEM	140	0.08	0	0	N/A
0.0, AR-001	Luzerne	PSS	140	0.02	0	0	N/A
0.1	Luzerne	PSS	284	0.62	0.36	0	Open Cut
3.1	Luzerne	PFO	143	0.14	0.12	0	Open Cut
5.8	Luzerne	PSS	31 f/	0.00 e/	0.00 e/	0	N/A
5.9	Luzerne	PSS	8	0.01	0.01	0	Open Cut
6.5	Luzerne	PEM	90 f/	0.03	0	0	N/A
7.5	Luzerne	PEM	36 f/	0.03	0.01	0	Open Cut
13.1	Luzerne	PSS	421	0.02	0	0	N/A
13.2, AR-028	Luzerne	PEM	124	0.08	0	0	N/A
13.2, AR-028	Luzerne	PSS	46	0.01	0	0	N/A
13.3, AR-029	Luzerne	PEM	44	0.01	0	0	N/A
13.3, AR-029	Luzerne	PEM	238	0.06	0	0	N/A
13.3, AR-029	Luzerne	PEM	152	0.05	0	0	N/A
13.7	Luzerne	PEM	36 f/	0.01	0	0	N/A
14.1	Luzerne	PFO	119 f/	0.06	0.02	0	Open Cut
PennEast Mainline – Delaware River Basin							
14.9	Luzerne	PFO	124	0.22	0.15	0	Open Cut
16	Luzerne	PFO	645	1.4	0.93	0	Open Cut
16.1	Luzerne	PSS	5	0.01	0.01	0	N/A
16.2	Luzerne	PSS	331	0.29	0.19	0	Open Cut
16.4	Luzerne	PSS	83	0.15	0.09	0	Open Cut

Table G-11

Wetlands Crossed by the Project in Pennsylvania

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/ Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
16.4	Luzerne	PEM	60 f/	0.01	0.00 e/	0	N/A
16.5	Luzerne	PEM	47 f/	0.02	0.00 e/	0	N/A
16.6, AR-031	Luzerne	PEM	206 f/	0.05	0	0	N/A
16.6, AR-031	Luzerne	PSS	56 f/	0.01	0	0	N/A
16.6, AR-031	Luzerne	PFO	444 f/	0.07	0	0	N/A
16.6, AR-031	Luzerne	PFO	186 f/	0.02	0	0	N/A
16.6, AR-031	Luzerne	PFO	181 f/	0.01	0	0	N/A
16.6, AR-031	Luzerne	PFO	28 f/	0.00*	0	0	N/A
16.6, AR-031	Luzerne	PSS	85 f/	0.02	0	0	N/A
16.6, AR-031	Luzerne	PUB	88 f/	0.00*	0	0	N/A
16.6, AR-031	Luzerne	PSS	66 f/	0.00*	0	0	N/A
16.6, AR-031	Luzerne	PFO	278 f/	0.02	0	0	N/A
16.6, AR-031	Luzerne	PSS	80 f/	0.01	0	0	N/A
16.8	Luzerne	PFO	240	0.41	0.28	0	Open Cut
16.8	Luzerne	PEM	321 f/	0.00 e/	0.00 e/	0	Open Cut
17.7	Luzerne	PEM	170 f/	0.52	0.35	0	N/A
17.7	Luzerne	PFO	336	0.61	0.37	0	Open Cut
19.6	Luzerne	PFO	40	0.06	0.04	0	Open Cut
19.7	Luzerne	PFO	170	0.28	0.2	0	Open Cut
19.7	Luzerne	PEM	37 f/	0.00 e/	0	0	N/A
22.4	Luzerne	PSS	54 f/	0.01	0.00 e/	0	N/A
22.5	Luzerne	PEM	212 f/	0.04	0.00 e/	0	N/A
22.7	Luzerne	PFO	65 f/	0.02	0.01	0	Open Cut
22.7	Luzerne	PEM	3.7	0.00 e/	0	0	N/A
24.2	Carbon	PFO	134 f/	0.02	0	0	N/A

Table G-11

Wetlands Crossed by the Project in Pennsylvania

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/ Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
24.5	Carbon	PFO	44 f/	0.01	0	0	N/A
26.4	Carbon	PFO	26	0.01	0.03	0	Open Cut
26.4	Carbon	PEM	409	0.66	0.44	0	N/A
26.7	Carbon	PSS	210 f/	0.59	0.04	0	Open Cut/HDD
26.8	Carbon	PEM	367	0.38	0.21	0	HDD
26.9	Carbon	PEM	155 f/	0.02	0.00 e/	0	N/A
26.9	Carbon	PFO	53	0.22	0.06	0	Open Cut
26.9	Carbon	PSS	1,624	2.84	1.94	0	Open Cut
27.6	Carbon	PEM	136 f/	0.05	0.03	0	Open Cut
27.9	Carbon	PSS	84 f/	0.03	0.02	0	Open Cut
29.5	Carbon	PFO	850	1.49	0.98	0	Open Cut
30.2	Carbon	PSS	22	0.05	0.04	0	Open Cut
30.9	Carbon	PFO	1702	2.78	1.92	0	Open Cut
30.9	Carbon	PEM	1,051 f/	0.13	0.03	0	N/A
33.1	Carbon	PSS	37 f/	0.02	0.01	0	Open Cut
33.5	Carbon	PFO	287	0.63	0.35	0	Open Cut
34.4	Carbon	PFO	1722	3.08	2.01	0	Open Cut
34.6	Carbon	PEM	88 f/	0.01	0.00 e/	0	N/A
35.4	Carbon	PFO	178	0.29	0.21	0	Open Cut
35.5	Carbon	Vernal Pool	48	0.01	0.01	0	N/A
36.1	Carbon	PFO	101 f/	0.07	0.01	0	N/A
36.6	Carbon	PFO	1147	1.64	1.23	0	Open Cut
37.1, AR-042	Carbon	PSS	N/A	0.1	0	0	N/A
37.1	Carbon	PFO	340	0.59	0.39	0	Open Cut
37.5	Carbon	PEM	59 f/	0.01	0.01	0	N/A

Table G-11

Wetlands Crossed by the Project in Pennsylvania

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/ Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
39.6	Carbon	PEM	158 f/	0.03	0.01	0	N/A
39.6	Carbon	PFO	39	0.07	0.04	0	Open Cut
40.1	Carbon	PEM	0	0.01	0.01	0	Open Cut
44.2	Carbon	PSS	13	0	0.04	0	HDD
45	Carbon	PEM	31	0.07	0.04	0	Open Cut
45.6	Carbon	PEM	39	0.01	0.01	0	Open Cut
48.1	Carbon	PSS	53	0.06	0.05	0	Open Cut
48.1	Carbon	PSS	22	0.02	0.02	0	Open Cut
49	Carbon	PFO	562	0.9	0.64	0	Open Cut
49	Carbon	PSS	546	1.36	0.76	0	Open Cut
49.3	Carbon	PFO	217	0.14	0.11	0	Open Cut
52.4	Northampton	Vernal Pool	25	0.03	0.03	0	Open Cut
52.6	Northampton	Vernal Pool	67	0.09	0.07	0	Open Cut
53.5	Northampton	PFO	105	0.18	0.12	0	Open Cut
54.3	Northampton	PFO	186	0.31	0.21	0	Open Cut
56	Northampton	PFO	123	0.06	0.04	0	Open Cut
59.2	Northampton	PEM	41	0.07	0.05	0	Open Cut
60.6	Northampton	PEM	60	0.11	0.07	0	BORE
61.5	Northampton	PEM	2	0	0	0	N/A
64.3	Northampton	PEM	7	0.02	0.01	0	BORE / Open Cut
72.1	Northampton	PFO	78	0.21	0.11	0	Open Cut
72.5	Northampton	PFO	20 f/	0.00 e/	0	0	N/A
72.6	Northampton	PEM	6	0.01	0.01	0	Open Cut
72.7	Northampton	PFO	1114	0.36	1	0	Open Cut
73.5	Northampton	PFO	381	0.61	0.42	0	Open Cut

Table G-11

Wetlands Crossed by the Project in Pennsylvania

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/ Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
74.9	Northampton	PEM	108	0.15	0.11	0	Open Cut
75.7	Northampton	PFO	57 f/	0.02	0.01	0	Open Cut
77.5	Bucks	PFO	65	0	0.01	0	HDD
Compressor Station - Delaware River Basin							
26.5	Carbon	PFO	160	0.1	0.08	0	Open Cut
26.5	Carbon	PSS	150	0.1	0.07	0	Open Cut
26.5	Carbon	PEM	12	0	0.00 e/	0	Open Cut
26.5	Carbon	PEM	N/A	0	0.01	0	N/A
26.5	Carbon	PEM	N/A	0	0.00 e/	0	N/A
		Total	**22541.7**	**26.51**	**17.27**	**0**	

Notes:
PEM = Palustrine Emergent
PSS = Palustrine Scrub-Shrub
PFO = Palustrine Forested

a/ Wetland Cover Type based on Cowardin, 1979 and NJDEP, 1986 data

b/ Approximate wetland crossing distance measured within the proposed workspace.

c/ For temporary impacts, acreage affected based on ATWS and temporary workspace. For permanent conversion, acreage affected based on permanent workspace as presented on GIS shapefile, subject to change based on construction methodologies.

d/ Pipeline trench width will vary based upon site-specific conditions to account for worker safety and substrate stability. Construction procedures to preserve the integrity and function of the wetland will be used and the sites will be restored in accordance with FERC's Wetland and Waterbody Construction and Mitigation Procedures and in compliance with applicable permit conditions.

e/ Acreage less than 0.005 acres.

f/ Wetland does not cross centerline. Crossing width measured along construction ROW.

Table G-12

Wetlands Crossed by the Project in New Jersey

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
PennEast Mainline - Upper Delaware River Basin; Middle Delaware-Musconetcong HUC-8 Watershed							
77.7	Hunterdon	PSS	107	0.127	0.127	0	HDD
80.0	Hunterdon	PFO	133	0.225	0.149	0	Open Cut
80.7	Hunterdon	MODag	340	0.72	0.336	0	Open Cut
80.8	Hunterdon	PEM	86	0.049	0.039	0	Open Cut
81.6	Hunterdon	PEM	7	0.005	0.004	0	Bore
81.6	Hunterdon	PEM	4	0.003	0.002	0	Bore
82.3	Hunterdon	PEM	101	0.193	0.115	0	Bore
82.3	Hunterdon	PSS	195	0.312	0.224	0	Open Cut
82.3	Hunterdon	PFO	33	0.045	0.037	0	Open Cut
82.3	Hunterdon	MODag	156	0.412	0.179	0	Open Cut
82.7	Hunterdon	PFO	117	0.192	0.133	0	Open Cut
82.9	Hunterdon	MODag	114	0.543	0.129	0	Open Cut
83.9	Hunterdon	PFO	196	0.373	0.23	0	Open Cut
84.6	Hunterdon	MODag	124	0.277	0.143	0	Open Cut
84.8	Hunterdon	PFO	39	0.002	0	0	N/A
84.8	Hunterdon	PSS	48	0.077	0.055	0	Open Cut
84.8	Hunterdon	PSS	78	0.136	0.089	0	Open Cut
85.3	Hunterdon	PFO	1	0	0	0	N/A
85.3	Hunterdon	PSS	227	0.418	0.267	0	Open Cut
85.3	Hunterdon	PEM	79	0.126	0.086	0	Open Cut
86.3	Hunterdon	PFO	92	0.168	0.106	0	Open Cut
86.3	Hunterdon	MODag	107	0.238	0.122	0	Open Cut
85.9	Hunterdon	PEM	70	0.123	0.08	0	Open Cut
86	Hunterdon	PFO	96	0.168	0.111	0	Open Cut

Table G-12

Wetlands Crossed by the Project in New Jersey

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
86.7	Hunterdon	PSS	9	0.001	0	0	Open Cut
86.7	Hunterdon	PSS	47	0.089	0.056	0	Open Cut
87.2	Hunterdon	PFO	78	0.157	0.089	0	Open Cut
87.4	Hunterdon	PEM	18	0.049	0.03	0	Bore
87.9	Hunterdon	PFO	250	0.41	0.286	0	Open Cut
88.4	Hunterdon	PFO	85	0.149	0.097	0	Open Cut
88.4	Hunterdon	PFO	55	0.094	0.063	0	Open Cut
88.7	Hunterdon	PFO	76	0.133	0.088	0	Bore
89.5	Hunterdon	PFO	53	0.096	0.06	0	Open Cut
90.8	Hunterdon	MODag	635	2.111	0.719	0	Open Cut
90.9	Hunterdon	PSS	370	0.523	0.387	0	Open Cut
90.9	Hunterdon	PFO	25	0.041	0.029	0	Open Cut
90.9	Hunterdon	MODL	17	0.123	0.055	0	Open Cut
91.2	Hunterdon	MODag	1,025	2.627	1.121	0	Open Cut
91.3	Hunterdon	PFO	13	0.001	0	0	N/A
91.3	Hunterdon	MODag	137	0.07	0	0	N/A
91.3	Hunterdon	MODag	109	0.277	0.117	0	Open Cut
91.5	Hunterdon	PFO	207	0.24	0.24	0	HDD
91.5	Hunterdon	PFO	52	0.071	0.071	0	HDD
91.7	Hunterdon	PFO	85	0.097	0.097	0	HDD
91.9	Hunterdon	MODag	711	0.797	0.797	0	HDD
92.2	Hunterdon	PFO	500	0.567	0.567	0	HDD
92.3	Hunterdon	PFO	457	0.528	0.528	0	HDD
92.5	Hunterdon	MODag	123	0.05	0	0	N/A
92.7	Hunterdon	MODag	50	0.073	0.049	0	Open Cut

Table G-12

Wetlands Crossed by the Project in New Jersey

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
93.2	Hunterdon	PFO	199	0.332	0.227	0	Open Cut
93.2	Hunterdon	PFO	307	0.532	0.367	0	Open Cut
93.3	Hunterdon	PFO	1,170	1.883	1.197	0	Open Cut
93.5	Hunterdon	MODR	271	0.584	0.453	0	Open Cut
93.8	Hunterdon	MODR	32	0.085	0.047	0	Open Cut
93.8	Hunterdon	PFO	332	0.475	0.335	0	Open Cut
94.3	Hunterdon	PFO	128	0.278	0.15	0	Open Cut
94.3	Hunterdon	MODag	550	1.383	0.62	0	Open Cut
94.6	Hunterdon	PFO	83	0.141	0.094	0	Open Cut
94.8	Hunterdon	PEM	68	0.003	0	0	N/A
94.8	Hunterdon	PFO	50	0.078	0.057	0	Open Cut
95.1	Hunterdon	PFO	0	0.122	0.1	0	Open Cut
95.1	Hunterdon	PFO	201	0.241	0.134	0	Open Cut
95.6	Hunterdon	MODag	31	0.017	0.008	0	Open Cut
97.3	Hunterdon	PFO	122	0.198	0.141	0	Open Cut
97.5	Hunterdon	MODag	283	0.758	0.322	0	Open Cut
98.4	Hunterdon	PFO	57	0.287	0.114	0	Bore
98.5	Hunterdon	MODag	134	0.197	0.115	0	Bore
98.7	Hunterdon	PFO	176	0.295	0.181	0	Open Cut
98.7	Hunterdon	MODR	63	0.077	0.064	0	Open Cut
99.6	Hunterdon	MODag	99	0.164	0.112	0	Open Cut
99.8	Hunterdon	MODag	160	0.207	0.182	0	N/A
100.3	Hunterdon	PFO	230	0.263	0.263	0	HDD
101	Hunterdon	MODag	112	0.202	0	0	Open Cut
101.3	Hunterdon	PEM	5	0.006	0.005	0	Open Cut

Table G-12

Wetlands Crossed by the Project in New Jersey

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
101.3	Hunterdon	PSS	2	0.01	0.004	0	Open Cut
101.3	Hunterdon	PEM	2	0.001	0	0	Open Cut
103	Hunterdon	PFO	23	0.005	0	0	Open Cut
103	Hunterdon	PFO	640	0.976	0.662	0	Open Cut
103.8	Hunterdon	PEM	68	0.196	0.083	0	Open Cut
104.9	Mercer	PEM	49	0.017	0.011	0	Open Cut
105.3	Mercer	PEM	3	0.008	0.005	0	Open Cut
105.3	Mercer	PEM	22	0.033	0.021	0	Open Cut
105.4	Mercer	PEM	207	1.23	0.239	0	Open Cut
105.4	Mercer	PEM	33	0.011	0	0	Open Cut
105.6	Mercer	PFO	74	0.082	0.082	0	HDD
105.9	Mercer	PFO	10	0.011	0.011	0	HDD
105.9	Mercer	PFO	61	0.078	0.078	0	HDD
107.4	Mercer	PEM	33	0.011	0	0	N/A
108.2	Mercer	PFO	243	0.436	0.269	0	Open Cut
108.6	Mercer	PSS	583	1.013	0.667	0	Open Cut
109.1	Mercer	PFO	98	0.16	0.105	0	Open Cut
109.1	Mercer	PFO	62	0.107	0.071	0	Open Cut
109.5	Mercer	PEM	36	0.048	0.041	0	Open Cut
110.2	Mercer	PEM	132	0.221	0.151	0	Open Cut
112.5	Mercer	PFO	27	0.071	0.035	0	Open Cut
112.5	Mercer	PFO	325	0.412	0.35	0	Open Cut
112.8	Mercer	PFO	93	0.071	0.029	0	N/A
112.8	Mercer	PEM	21	0.005	0.001	0	Open Cut
112.8	Mercer	PFO	137	0.198	0.116	0	Open Cut

Table G-12

Wetlands Crossed by the Project in New Jersey

MP	County	Wetland Cover Type a/	Crossing Width (ft) b/	Temporary Wetland Impact for Construction (acre) c/	Forested and Scrub/Shrub Wetlands Permanently Converted to Herbaceous Wetland for Operation of the Pipeline (acre) c/	Wetland/Water Area Permanently Filled (acre)	Proposed Pipeline Crossing Method d/
112.8	Mercer	PSS	235	0.378	0.255	0	Open Cut
112.8	Mercer	MODag	24	0.087	0.066	0	Open Cut
112.9	Mercer	PEM	531	0.911	0.61	0	Open Cut
113.4	Mercer	PEM	11	0.011	0.011	0	Bore
114	Mercer	PEM	58	0.053	0	0	Open Cut
		Total	**16443**	**29.965**	**17.57**	**0**	

Gilbert Lateral – Upper Delaware River Basin

None.

Lambertville Lateral – Upper Delaware River Basin

None.

Notes:

a/ Wetland Cover Type based on Cowardin, 1979 and NJDEP, 1986 data

b/ Approximate wetland crossing distance measured within the proposed workspace.

c/ For temporary impacts, acreage affected based on ATWS and temporary workspace. For permanent conversion, acreage affected based on permanent workspace as presented on GIS shapefile, subject to change based on construction methodologies.

d/ Pipeline trench width would vary based upon site-specific conditions to account for worker safety and substrate stability. Construction procedures to preserve the integrity and function of the wetland would be implemented, and the sites would be restored in accordance with FERC's Wetland and Waterbody Construction and Mitigation Procedures and in compliance with applicable permit conditions.

Table G-13

Federally and State Listed Species Potentially Occurring Within the Project Area

Species Group **Species Common Name** ***Scientific Name***	**Federal Status**	**State Status a/**	**Project Components where Present**	**Mile Post/ County/ State of Potential Occurrence within Project Area b/**	**Surveys Conducted (Y/N) c/**	**Status and Results of Species Surveys**	**Agency Consultation Recommendations for Avoidance, Minimization, and/or Mitigation of Impacts to Listed Species**
Mammals							
Indiana bat *Myotis sodalis*	Endangered	Endangered (PA, NJ)	Pipeline	Entire Route in PA, Entire Route in NJ	Yes	PA- Complete NJ- 16 mist net sites remain to be completed No Indiana bats detected in project area.	Mist net surveys and radio-telemetry conducted in coordination with USFWS, NJDEP-DFW, and PGC. Report submitted to USFWS October 2015. Response Pending.
Northern long-eared bat *Myotis septentrionalis*	Threatened	Special Concern (PA) Proposed Endangered (NJ)	Pipeline	Entire Route in PA, Entire Route in NJ (Hibernacula near MP 11.3 and MP 77.25)	Yes	PA- Complete NJ- 16 mist net sites remain to be completed Northern long-eared bats detected in project area (both PA and NJ).	Mist net surveys and telemetry conducted in coordination with USFWS, NJDEP-DFW, and PGC. Northern long-eared bats detected in project area. Report submitted to USFWS October 2015. Response Pending. PGC requiring all trees greater than 5" diameter at breast height (DBH) are harvested between November 1 and March 31 to prevent impacts to northern long-eared bats**. PennEast will comply.** USFWS mandated 0.25-mile activity restriction buffer near known hibernacula at 11.3 and 77.25. **PennEast will comply**.
Northern flying squirrel *Glaucomys sabrinus macrotis*	Not Listed	Endangered (PA)	Pipeline	MP 27-MP 32 Carbon, PA	No	N/A	PGC is requiring northern flying squirrel avoidance areas and tree clearing restrictions between April 15 - June 15, as well as a habitat mitigation plan, between MP 27 and MP 32. **PennEast will adhere to PGC recommendations**.
Bobcat *Lynx rufus*	Not Listed	Endangered (NJ)	Pipeline	Hunterdon County, NJ	No	N/A	NJ Natural Heritage Program listed as species of concern and mapped by NJ Landscape Project (Version 3.1). No surveys required. NJDEP requests that potential impacts to den habitat be assessed;
Allegheny woodrat *Neotoma magister*	Not Listed	Threatened (PA) Endangered (NJ)	None	MP 51-Mp 53.5 Carbon & Northampton, PA	Yes	MP 51-53 Surveys Complete, No woodrat sign MP 53-53.2- Surveys pending, no access MP 53.2-53.5 Surveys Complete, no woodrat sign	A habitat survey by qualified biologist in PGC-specified areas was conducted . Potential habitat but no woodrat sign were identified. Report submitted to PGC in October 2015. Response pending.

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Eastern small-footed bat *Myotis leibii*	Not Listed	Threatened (PA) Endangered (NJ)	Pipeline	MP 8.5-MP 11.5 and MP 51-MP 53.5 Carbon & Northampton, PA	Yes	MP 8.5-10.5- Surveys completed, 23 areas (2.63 acres) of potential roost habitat identified MP 10.5-11.5- Surveys Pending, no access MP 51-53- Surveys completed, 6 areas (1.2 acres) of potential roost habitat identified. MP 53-53.2- Surveys pending, no access MP 53.2-53.5- Surveys completed. Roost habitat areas identified (included in note above)	Eastern small-footed bat survey (day roosts) by qualified biologist was conducted in PGC-specified areas. ESF bats identified during other bat surveys. Survey report provided to PGC in October 2015. Response pending.
Reptiles							
Bog turtle *Glyptemys muhlenbergii*	Threatened	Endangered (PA, NJ)	Pipeline	Carbon County (Aquashicola drainage only) Northampton & Bucks, PA; NJ	Yes	PA: Phase I surveys completed at all delineated wetlands to date. Phase 2 surveys completed at 5 wetlands in 2015, no bog turtles found. Phase 2 surveys ongoing in 2016 at 1 wetland. Phase 3 surveys ongoing in 2016 at 1 wetland. NJ: No Phase 2 surveys completed to date. Phase I surveys pending access and completion of wetland delineations (9 of 23 done).	Technical Reports for 2015 Phase I and Phase 2 Bog Turtle Surveys completed in Pennsylvania submitted to USFWS in October 2015. Response pending.

Timber rattlesnake *Crotalus horridus*	Not Listed	Candidate (PA) Endangered (NJ)	Pipeline	Luzerne, Carbon, & Northampton, PA MP 10.5-10.7 (#4) Old MP 11.1-11.6 (#12) MP 12.9-13.1 (#5) MP 14.1- 16.9 (#13) MP 22.5-23.1 (#6) MP 23.7- 24.1 (#7) MP 29.3- 29.5 (#8) MP 30.1- 30.7 (#9) MP 32.9 – 33.3 (#14) MP 37.9- 40.6 (#15) MP 51.1-51.6 (#16)	Yes	Survey Area 4 MP 10.5-10.7 Phase I Surveys Complete, habitat found, Phase 2 surveys ongoing Survey Area 12 September MP 11.1-11.6 Phase 1 Surveys complete, habitat found. No longer on route. Survey Area 5 MP 12.9-13.1 Phase I Surveys complete, habitat found. Phase 2 surveys ongoing. Survey Area 13 MP 14.1-16.9 Phase I surveys complete, habitat found. Mitigation measures to recreate gestation habitat. Survey Area 6 MP 22.5-23.1 Phase I surveys complete, habitat found. Phase 2 surveys ongoing. Survey Area 7 MP 23.7-24.1 Phase I surveys complete, habitat found. Mitigation measures to avoid habitat during construction. Survey Area 8 MP 29.3-29.5 Phase I Surveys complete, habitat found. Mitigation measures to recreate gestation habitat and avoid denning habitat. Survey Area 9 MP 30.1-30.7 Phase I Surveys Complete, habitat found. Mitigation measures to recreate gestation habitat and avoid denning habitat. Survey Area 14 MP 32.9-33.3 Phase I Surveys complete no habitat identified. Survey Areas 15 & 16 MP 37.9-40.6; 51.1-51.6 Phase I Surveys complete, habitat found. Phase 2 surveys ongoing	One timber rattlesnake observed during field surveys (MP 39.2). Mitigation measures to include minor alignment shifts to avoid potential denning habitat in Survey areas 7,8,9. **PennEast will comply**. Potential gestating habitat in Survey Areas 6, 8, and 9 may be disturbed by construction and should be rebuilt. **PennEast will comply.** To avoid impacts to den identified near MP 39.2, PFBC asking that PennEast adhere to a 300 ft buffer from the den (flip pipeline to opposite side of ROW in that area if possible) and a rattlesnake monitor on-site during construction between April 15 and October 15**. PennEast will comply.** Impact assessment to dens pending in survey areas 4, 5, 6, 15 & 16.

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Eastern redbelly turtle (Delaware River) *Pseudemys rubriventris*	Not Listed	Threatened (PA)	Delaware River	PA	No	N/A	**PennEast will comply** with PFBC requirement to HDD the Delaware River crossing to avoid redbelly turtle impacts.
Wood turtle *Glyptemys insculpta*	Not Listed	Threatened (NJ)	Pipeline waterbody crossings in Mercer County (MP 105.1, MP 105.5)	NJ	Habitat Assessment	Potential Habitat Identified	NJ Natural Heritage Program listed as species of concern. **PennEast will comply with timing restriction from November 15 through March 15 for in-stream work,** and conduct pre-construction clearance surveys where infeasible or during spring breeding season (April-May).
Northern copperhead *Agkistrodon contortrix mokasen*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Yes	Critical Habitat Assessment Complete on Accessible Parcels; Potential Habitat Identified at MP 81.4 and additional surveys pending.	NJ Natural Heritage Program listed as species of concern. ENSP stated in July 2015 correspondence that surveys on county-lands will be required to identify potential gestating and hibernating habitat. Qualified venomous snake surveyor has completed critical habitat assessment on accessible parcels and identified areas where further targeted surveys are planned.
Eastern box turtle *Terrapene carolina*	Not Listed	Special Concern (NJ)	Pipeline	PA, NJ	No	N/A	Species was not identified in consultation with NJNHP or ENSP but FERC commented that it should be added to this list; also it was observed during field surveys. Therefore minimization measures, including potential biological monitoring during construction, will be negotiated with NJDEP and ENSP during permit process.
Plants- Federal							
Northeastern bulrush *Scirpus ancistrochaetus*	Endangered	Endangered (PA)	Pipeline	Wetlands over 1300' in elevation in Carbon & Northampton, PA See Table 3.5-5 in RR3	Yes	All accessible wetland parcels with potential habitat-surveys completed in 2015. No *Scirpus ancistorochaetus* found. Additional 8 wetlands delineated near MP 26.9 to be assessed in 2016.	A northeastern bulrush survey was conducted by qualified botanist (June 1-Sept. 30). No bulrush found in targeted surveys completed. Report submitted to USFWS in October 2015. Response pending.

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Plants- State							
Variable sedge *Carex polymorpha*	Not Listed	Endangered (PA)	Pipeline	Penn Forest Township, Carbon County	Yes	Completed- *C. polymorpha* found at MPs: 36.2, 36.45, 36.75, 36.85, and 36.9. Additional impact assessment surveys planned for July 2016.	Recommend pre-construction flagging of plant locations. In its letter dated 10/22/2015, DCNR requested additional assessment of population by botanist. If population is large and robust enough, DCNR may determine that project will not impact the plant. Additional surveys are planned for this summer.
White Fringed Orchid *Platanthera blephariglottis*	Not Listed	Endangered (PA)	Pipeline	Penn Forest Township, Carbon, PA	Yes	Surveys completed- *P. blephariglottis* identified at MPs: 27, 27.2, 34.55, 34.6	**Will be impacted by project if plant site cannot be avoided**. DCNR requested in its 10/22/15 letter that the **pipeline be shifted to the west side of the existing ROW** to minimize impacts to the plant population. PennEast will implement pre-construction flagging of plant locations for avoidance. DCNR states that transplantation is not likely to succeed and if impacts cannot be avoided additional mitigation will need to be determined.
Screw stem *Bartonia paniculata*	Not Listed	Rare (PA)	None	SGL 129 and Penn Forest Township, Carbon, PA	Yes	Completed- no *B. paniculata* found	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.
Collin's Sedge *Carex collinsii*	Not Listed	Endangered (PA)	None	Penn Forest Township, Carbon, PA	Yes	Completed- no *C. collinsii* found	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.

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Rough-leaved aster *Eurybia radula*	Not Listed	Endangered (PA)	Pipeline	Weiser State Forest, Penn Forest Township, Carbon, PA	Yes	Completed- *E. radula* identified at MP 36.8	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Plant identified during targeted surveys. **Will be impacted by project if plant site cannot be avoided.** PennEast will implement pre-construction flagging of plant locations. In its letter dated 10/22/15 **DCNR recommends shifting pipeline to west to avoid population and also collection of seed for later dispersal or transplantation.**
Creeping snowberry *Gaultheria hispidula*	Not Listed	Rare (PA)	None	Kidder Township, Carbon County and SGL 129	Yes	Completed- no *G. hispidula* found.	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.
Bog sedge *Carex paupercula*	Not Listed	Threatened (PA)	None	Kidder Township, Carbon, PA	Yes	Completed- no *C. paupercula* found.	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.
Spotted pondweed *Potomogeton pulcher*	Not Listed	Endangered (PA)	None	SGL 168, Moore Township, Northampton County, PA	Yes	No longer needed	DCNR listed as rare plant in vicinity of project. Reroute in July avoided the potential site.
Wild Bleeding Hearts *Dicentra exima*	Not Listed	Endangered (PA)	None	Beltzville State Park, Towamensing Township, Carbon, PA	Yes	Completed- no *D. exima* found.	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.
Squirrel-corn *Dicentra canadensis*	Not Listed	Endangered (NJ)	TBD	Hunterdon & Mercer, NJ	Yes	Pending additional access	NJ Natural Heritage Program listed as species of concern. None identified during targeted surveys of accessible parcels. Additional surveys in NJ to be conducted next season.

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Wild Blue Phlox *Phlox divericata*	Not Listed	Endangered (NJ)	TBD	Hunterdon & Mercer, NJ	Yes	Pending additional access	NJ Natural Heritage Program listed as species of concern. None identified during targeted surveys of accessible parcels. Additional surveys in NJ to be conducted next season.
Holmes' Hawthorne *Crataegus holmesiana*	Not Listed	Endangered (NJ)	TBD	Hunterdon & Mercer, NJ	Yes	Pending additional access	NJ Natural Heritage Program listed as species of concern. None identified during targeted surveys of accessible parcels. Additional surveys in NJ to be conducted next season.
Matted spike rush *Eleocharis intermedia*	Not Listed	Of Concern	None	Beltzville State Park (Carbon Co, PA)	Yes	Completed- no *E. intermedia* found	Special request by DCNR Bureau of State Parks/Forestry. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.
Sweet-gale *Myrica gale*	Not Listed	Threatened (PA)	None	Luzerne & Carbon, PA	Yes	Completed- no *M. gale* found.	Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, listed as rare plant in vicinity of project. Surveys were conducted for this plant by a qualified botanist and none were found. No impact letter issued by DCNR on 10/22/2015.
Torrey's bulrush *Schoenoplectus torreyi*	Not Listed	Endangered (PA)	Pipeline	Carbon, PA	Yes	Completed- S. torreyi identified at MP 26.52	This species was not identified in coordination with DCNR but was identified during botanical surveys of the project area. Additional consultation ongoing regarding mitigation measures needed.
Appalachian climbing fern *Lygodium palmatum*	Not Listed	Of Concern	Pipeline	Weiser State Forest, Carbon PA	Yes	Complete- *L. palmatum* identified at MP 36.7	Special request by DCNR Bureau of State Parks/Forestry. Survey conducted by qualified botanist and plant found within existing utility ROW. Site location will be flagged prior to construction and plant relocated if avoidance not possible.

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Birds							
Bald eagle *Haliaeetus leucocephalus*	Protected under the Bald and Golden Eagle Protection Act	Delisted (PA) Endangered (NJ)	pipeline	PA, NJ Vicinity Nest Locations: 23.2 23.7 43 79	Yes	Completed- no additional nests identified aside from those mapped in RR3	NJ Natural Heritage Program requesting time restriction from December 15 through July 31 for known nest habitats. Nearest known nest in NJ is well outside project corridor. USFWS listed as migratory bird of concern and requested Bald Eagle Screening. Bald Eagle Project Screening form completed and submitted to USFWS in October 2015. Recommended avoidance measures (AM) that will be followed includes AM 3, AM 4, and AM 5 plus AM for blasting (see bald eagle section of RR3 for details of AMs).
Osprey *Pandion haliaetus*	Not Listed	Threatened (PA, NJ)	Delaware River	Old MP 74.5 to MP 75 (MP 77.1- MP 77.6) Bucks, PA & Hunterdon, NJ	Yes	Potential habitat at Delaware River. No osprey nests noted during surveys.	PGC and NJ Natural Heritage Program listed as bird of concern. Osprey restriction area between MP 77.1- MP 77.6 in Bucks, PA and Hunterdon, NJ. PGC states that work should be done between August 1 and March 24 in this area**. PennEast will comply with timing restriction. Will be coordinated with the November 1- March 31 acceptable tree clearing timeframe for bats.** NJ: A nest survey is proposed in Landscape Project mapped habitats in NJ when parcels are accessible to ensure no nest trees are present within the alignment.
Red-shouldered hawk *Buteo lineatus*	Not Listed	Endangered (NJ)	Pipeline	NJ	Yes	Potential habitat; callback surveys pending access.	NJ Natural Heritage Program recommended time restriction from March 1 through July 31. Callback surveys are proposed in mapped habitats on accessible parcels in May – July, 2016. Additional location data provided by NJDEP and in a landowner comment letter in April, 2016.

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American kestrel *Falco sparverius*	Not Listed	Threatened (NJ)	Pipeline	NJ	Yes	Potential habitat; point count surveys in progress.	NJ Natural Heritage Program listed as bird of concern. Must identify presence/absence of raptor nests for listed species; American Kestrel included as target species for point count bird surveys to begin May, 2016. Assume presence and implement timing restriction on tree clearing for woodland raptors. Identify snags that may be left in place and consult with NJDEP-DFW on potential contribution to nest box program.
Bobolink *Dolichonyx oryzivorus*	Not Listed	Threatened (NJ)	Pipeline	NJ	Yes	Potential habitat in open fields; point count surveys in progress	NJ Natural Heritage Program listed as bird of concern. Included as target species for point count bird surveys to begin May, 2016. Implement construction timing restriction and post-construction mowing restrictions March 15-September 10 in suitable habitat.
Grasshopper sparrow *Ammodramus savannarum*	Not Listed	Threatened (NJ)	Pipeline	NJ	Yes	Potential habitat in open fields; point count surveys in progress	NJ Natural Heritage Program listed as bird of concern. Included as target species for point count bird surveys to begin May, 2016. Implement construction timing restriction and post-construction mowing restrictions March 15-September 10 in suitable habitat.
Barred owl *Strix varia*	Not Listed	Threatened (NJ)	Pipeline	NJ	Yes	Potential habitat located on currently non-accessible parcels; callback surveys pending access.	NJ Natural Heritage Program requesting time restriction from March 1-June 15. Implement timing restriction on tree clearing for woodland raptors. Conduct callback surveys in mapped habitat, and identify & avoid nest trees (dbh > 20”).
Savannah sparrow *Passerculus sandwichensis*	Not Listed	Threatened (NJ)	Pipeline	NJ	Yes	Potential habitat in open fields; point count surveys in progress	NJ Natural Heritage Program listed as bird of concern. Included as target species for point count bird surveys to begin May, 2016. Implement construction timing restriction and post-construction mowing restrictions March 15-September 10 in suitable habitat.

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Red-headed woodpecker *Melanerpes erythrocephalus*	Not Listed	Threatened (NJ)	Pipeline (observed at MP 104.6)	PA, NJ	Yes	Identified in project area; critical habitat assessment in progress.	USFWS and Natural Heritage Program listed as species of concern. Species identified in project area. Critical habitat assessment proposed at reported locations. Avoidance to include timing restriction on tree clearing. Additional location data provided by NJDEP and in a landowner comment letter in April, 2016.
Brown thrasher *Toxostoma rufum*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Yes	Point count surveys in progress	NJ Natural Heritage Program listed as species of concern. Breeding bird surveys initiated April, 2016. Implement MBTA timing restrictions and USFWS "Adaptive Management Practices for Conserving Migratory Birds" (Appendix A)
Cliff swallow *Petrochelidon pyrrhonota*	Not Listed	Special Concern (NJ)	None	NJ	Habitat Assessment	No potential habitat in accessible parcels	NJ Natural Heritage Program listed as species of concern. No impact anticipated.
Cooper's hawk *Accipiter cooperii*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Yes	Call-back surveys in progress (MP 81.4-81.6)	NJ Natural Heritage Program listed as species of concern. Callback surveys initiated in March, 2016. Implement timing restriction on tree clearing for woodland raptors.
Eastern meadowlark *Sturnella magna*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Habitat Assessment	Potential habitat in open fields; point count surveys in progress	NJ Natural Heritage Program listed as bird of concern. Included as target species for point count bird surveys to begin May, 2016. Implement construction timing restriction and post-construction mowing restrictions March 15-September 10 in suitable habitat.
Great blue heron *Ardea herodias*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Habitat Assessment	Potential habitat in ponded wetlands.	NJ Natural Heritage Program listed as species of concern. Assume presence and expect that planned wetland protection measures will prevent impacts to this species.
American bittern *Botaurus lentiginosus*	Not Listed	Endangered (NJ)	None	NJ	Habitat Assessment	No potential habitat in accessible parcels	NJ Endangered and Nongame Species Program requesting surveys for "secretive marsh birds" in suitable habitat. No suitable habitat identified to date. No impacts expected from project.

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Least bittern *Ixobrychus exilis*	Not Listed	Special Concern (NJ)	None	NJ	Habitat Assessment	No potential habitat in accessible parcels	NJ Endangered and Nongame Species Program requesting surveys for "secretive marsh birds" in suitable habitat. No suitable habitat identified to date. No impacts expected from project.
Northern harrier *Circus cyaneus*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Habitat Assessment	Potential foraging habitat in open fields	NJ Natural Heritage Program listed as species of concern. Alignment contains grassland habitat and agricultural areas suitable for harrier foraging. Large tidal marshes suitable for nesting have not been identified to date. Breeding habitat for Northern harrier has not been mapped onsite. If suitable breeding habitat is identified, implement construction timing restriction from March 1-July 31
Northern parula *Parula americana*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Yes	Potential habitat in forested areas; surveys in progress	NJ Natural Heritage Program listed as species of concern. Breeding bird surveys initiated April, 2016. Implement MBTA timing restrictions and USFWS "Adaptive Management Practices for Conserving Migratory Birds" (Appendix A)
Veery *Catharus fuscescens*	Not Listed	Special Concern (NJ)	Pipeline	NJ	Yes	Potential habitat in forested areas; surveys in progress	NJ Natural Heritage Program listed as species of concern. Breeding bird surveys initiated April, 2016. Implement MBTA timing restrictions and USFWS "Adaptive Management Practices for Conserving Migratory Birds" (Appendix A)
Wood thrush *Hylocichla mustelina*	Not Listed	Special Concern (NJ)	Pipeline	PA, NJ	Yes	Potential habitat in forested areas; surveys in progress	NJ Natural Heritage Program listed as species of concern. Breeding bird surveys initiated April, 2016. Implement MBTA timing restrictions and USFWS "Adaptive Management Practices for Conserving Migratory Birds" (Appendix A)
Worm eating warbler *Helmitheros vermivorum*	Not Listed	Special Concern (NJ)	Pipeline	PA, NJ	Yes	Potential habitat in forested areas; surveys in progress	NJ Natural Heritage Program listed as species of concern. Breeding bird surveys initiated April, 2016. Implement MBTA timing restrictions and USFWS "Adaptive Management Practices for Conserving Migratory Birds" (Appendix A)
Sharp-shinned hawk *Accipiter striatus*	Not Listed	Special concern (NJ)	Pipeline	NJ	No	Potential habitat in forested areas, presence assumed.	USFWS listed as species of concern. Assume presence and implement MBTA timing restrictions and USFWS "Adaptive Management Practices for Conserving Migratory Birds" (Appendix A).

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Amphibians							
Northern cricket frog *Acris crepitans*	Not Listed	Endangered (PA)	None	Old MP 28.1 to Old MP 29.6 (MP 28.6- 30.1) Carbon, PA	Yes	Completed- no cricket frogs found.	Surveys were conducted by qualified northern cricket frog surveyor and habitat was identified; no frogs found in presence/absence search. No impacts anticipated. Report submitted to PFBC in October 2015- concurrence letter received November 5, 2015- "no impact to *Acris crepitans*"
Long-tailed salamander *Eurycea longicauda longicauda*	Not Listed	Threatened (NJ)	Pipeline	NJ	Habitat Assessment	suitable habitat identified on accessible parcels (MP 81.4-81.6)	NJ Natural Heritage Program species of concern and mapped by NJ Landscape Project (Version 3.1). Critical habitat survey conducted on accessible parcel. **NJDEP recommends avoidance through HDD crossings of suitable habitat**.
Southern Gray Treefrog *Hyla chrysoscelis*	Not Listed	Endangered (NJ)	None	NJ	No- outside of species range in NJ	Potential habitat in forested wetlands and ponds	Stakeholder comment raised this species as issue; however this species is not known to occur in Mercer or Hunterdon Counties. Inhabits forested wetlands often with vernal pools. Additional wetland surveys in non-accessible parcels planned. Wetland buffers required as part of FERC and permitting process will serve as protection/impact minimization.
Fish							
Atlantic sturgeon *Acipenser oxyrinchus*	Not Listed	Endangered (PA/ NJ)	Delaware River	PA	No	N/A	PFBC requiring HDD for Delaware River crossing to avoid sturgeon impacts. PennEast will comply- no impact expected.
Shortnose sturgeon *Acipenser brevirostrum*	Not Listed	Endangered (PA) Endangered (NJ)	Delaware River	PA	No	N/A	PFBC requiring HDD for Delaware River crossing to avoid sturgeon impacts. USFWS (PA) listed species of concern. PennEast will comply- no impact expected.

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Species Group **Species Common Name** ***Scientific Name***	**Federal Status**	**State Status a/**	**Project Components where Present**	**Mile Post/ County/ State of Potential Occurrence within Project Area b/**	**Surveys Conducted (Y/N) c/**	**Status and Results of Species Surveys**	**Agency Consultation Recommendations for Avoidance, Minimization, and/or Mitigation of Impacts to Listed Species**
Invertebrates							
Dwarf wedgemussel *Alasmidonta heterodon*	Endangered	Endangered (PA, NJ)	Delaware River	PA, NJ	No	N/A	PFBC requiring HDD for Delaware River crossing to avoid mussel impacts. USFWS (NJ) requiring HDD be used to avoid need to survey for mussels. PennEast will comply- no impact expected. NJDEP-ENSP still recommends surveys in suitable habitat; need will be refined during permitting process with NJDEP.
Cobblestone tiger beetle *Cicindela marginipennis*	Not Listed	Special Concern (NJ)	Delaware River	NJ	No	N/A	NJNHP listed as rare species of concern. Habitat is restricted to cobblestone and sand/gravel bars along river edges. Riverbank will not be impacted by pipeline through HDD installation methods, therefore no impact to this species is anticipated.

Sources: CWFNJ, 2012; CWFNJ, 2013; DCNR, 2014; Markuson, 2014; NJNHP, 2015; NOAA, 2015; PFBC, 2014; PFBC, 2015. PGC, 2013b; PGC, 2014. PGC, 2015. PNHP, n.d.; PNHP, 2014; Shellenberger, 2014; Taucher, 2014. Taucher, 2015. The Pennsylvania Code, 2014; USDOI, 2014(a-e); USFWS, n.d.;

a/ Status listed for ALL states affected by the Project though occurrence may not have been identified within Project area in some states – see column titled “Mile Post/County/State of Potential Occurrence within Project Area” for locations of possible occurrence.

b/ Based on federal and state resource agency feedback.

c/ Survey conducted information is current as of surveys completed by the end of April 2016.

Table G-14

Federal, State, County, Municipal Lands, and Public Conservation Areas That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Type of Area/Name of Associated Area	Land Ownership/Land Management	Approx. Crossing Length (feet)	Land Affected		Crossing Method
							Cont. (acres)	Oper. (acres)	
PennEast Mainline - Pennsylvania									
Luzerne	Kingston	2.1	2.4	General State Authority	State owned land/ Frances Slocum	1,702	5.3	2.0	Open Cut
Luzerne	West Wyoming	5.6	5.6	Luzerne County Redevelopment Authority	County owned land	141	0.4	0.2	Open Cut
Luzerne	West Wyoming	6.0	6.0	Luzerne County Redevelopment Authority	County owned land	59	0.1	0.1	Bore
Luzerne	Wyoming	6.0	6.3	Luzerne County Flood Protection Authority	County owned land	206	0.9	0.2	Open Cut
Luzerne	Jenkins	7.2	7.2	Luzerne County Redevelopment Authority	County owned land	0	0.1	0.0	Access Road
Luzerne	Jenkins	7.2	7.3	Luzerne County Redevelopment Authority	County owned land	72	0.1	0.1	Bore
Luzerne	Jenkins	7.8	8.0	Luzerne County Redevelopment Authority	County owned land	1,152	1.7	1.2	Open Cut
Luzerne	Plains	8.0	8.1	Luzerne County Redevelopment Authority	County owned land	257	0.5	0.3	Open Cut / Access Road
Luzerne	Plains	9.8	9.8	Luzerne County Redevelopment Authority	County owned land	42	0.0	0.0	Bore
Luzerne	Plains	12.0	12.4	Pennsylvania Commonwealth, Dept. of Conservation & Natural Resources	State owned land	1,633	5.5	1.9	Open Cut
Luzerne	Bear Creek	15.5	17.8	Pennsylvania Commonwealth	State owned land/ State Game Land area No. 91	10,195	35.6	11.7	Open Cut / Access Road
Luzerne	Bear Creek	17.4	17.5	Pennsylvania Commonwealth	State owned land/ State Game Land area No. 91	269	0.5	0.3	Open Cut
Luzerne	Bear Creek	17.5	18.3	Pennsylvania Commonwealth	State owned land/ State Game Land area No. 91	4,273	10.2	4.9	Open Cut
Luzerne	Bear Creek	21.3	22.7	Pennsylvania Commonwealth	State owned land	7,360	20.8	8.4	Open Cut / Access Road
Luzerne	Harrisburg	21.3	21.7	Commonwealth of PA	State owned land	0	6.8	0.0	Access Road
Luzerne	Bear Creek	22.7	22.7	US Army Corps Of Engineers	Federally owned land/Francis E. Walter Dam	297	0.8	0.3	Open Cut
					Luzerne County Subtotal	**27,659**	**89.1**	**31.7**	
Carbon	Kidder	22.8	22.9	US Government	Federally owned land/Francis E. Walter Dam	529	1.5	0.6	Open Cut

Table G-14

Federal, State, County, Municipal Lands, and Public Conservation Areas That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Type of Area/Name of Associated Area	Land Ownership/Land Management	Approx. Crossing Length (feet)	Land Affected		Crossing Method
							Cont. (acres)	Oper. (acres)	
Carbon	Kidder	24.6	25.6	Pennsylvania Commonwealth	State owned land/ State Game Land No. 40	5,005	17.6	5.7	Open Cut / Access Road
Carbon	Kidder	25.0	25.1	Pennsylvania Commonwealth	State owned land/ State Game Land No. 40	0	0.6	0.0	Access Road
Carbon	Kidder	28.3	28.4	Lehigh County	County owned land	0	0.7	0.0	Access Road
Carbon	Kidder	28.8	29.6	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	3,933	9.0	4.5	Open Cut
Carbon	Kidder	29.6	30.1	Pennsylvania Commonwealth	State owned land/ State Game Land No. 129	2,509	5.8	2.9	Open Cut
Carbon	Kidder	30.1	30.2	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	463	1.1	0.5	Open Cut
Carbon	Kidder	30.2	31.0	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	4,146	9.4	4.8	Open Cut
Carbon	Kidder	30.9	31.0	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	441	1.1	0.5	Open Cut
Carbon	Kidder	31.0	31.0	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	0	0.0	0.0	Open Cut
Carbon	Kidder	31.0	31.1	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	448	1.0	0.5	Open Cut
Carbon	Penn Forest	32.4	32.4	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	0	0.0	0.0	Open Cut
Carbon	Penn Forest	32.4	33.2	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	3,940	10.0	4.5	Open Cut
Carbon	Penn Forest	33.2	34.2	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	5,029	13.0	5.8	Open Cut
Carbon	Penn Forest	34.4	34.4	Pennsylvania Commonwealth	State owned land/ Hickory Run State Park	222	0.4	0.3	Open Cut
Carbon	Penn Forest	35.0	35.0	Pennsylvania Commonwealth, Dept Of Forests & Waters	State owned land/ Weiser State Forest	0	0.0	0.0	Open Cut
Carbon	Penn Forest	36.1	36.9	Pennsylvania Commonwealth, Dept Of Forests & Waters	State owned land/ Weiser State Forest	3,523	10.3	4.0	Open Cut / Access Road
Carbon	Penn Forest	36.8	37.6	Bethlehem Authority	Municipal owned land	2,207	7.9	2.5	Open Cut / Access Road
Carbon	Penn Forest	37.2	37.5	Bethlehem Authority	Municipal owned land	1,259	3.3	1.4	Open Cut
Carbon	Penn Forest	37.5	38.3	Bethlehem Authority	Municipal owned land	4,132	12.2	4.7	Open Cut
Carbon	Penn Forest	38.3	38.5	Bethlehem Authority	Municipal owned land	1,082	3.3	1.2	Open Cut
Carbon	Penn Forest	38.4	39.4	Bethlehem Authority	Municipal owned land	4,775	12.6	5.5	Open Cut
Carbon	Towamensing	42.8	43.3	USA	Federally owned land/Beltzville State Park	2,277	4.8	2.6	HDD / Open Cut
Carbon	Towamensing	43.3	43.5	USA	Federally owned land/Beltzville State Park	1,225	1.4	1.4	HDD
Carbon	Towamensing	43.5	43.6	USA	Federally owned land/Beltzville State Park	136	0.2	0.2	HDD
Carbon	Towamensing	43.6	43.6	USA	Federally owned land/Beltzville State Park	144	0.2	0.2	HDD
Carbon	Towamensing	43.6	43.7	US Army Corps Of Engineers	Federally owned land/Beltzville State Park	602	0.7	0.7	HDD
Carbon	Towamensing	43.8	43.9	USA	Federally owned land/Beltzville State Park	475	0.5	0.5	HDD

Table G-14

Federal, State, County, Municipal Lands, and Public Conservation Areas That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Type of Area/Name of Associated Area	Land Ownership/Land Management	Approx. Crossing Length (feet)	Land Affected		Crossing Method
							Cont. (acres)	Oper. (acres)	
Carbon	Towamensing	43.9	44.3	Bethlehem Authority	Municipal owned land	2,358	5.4	2.7	HDD / Open Cut
Carbon	Lower Towamensing	50.6	50.7	USA	Federally owned land	0	0.0	0.0	Open Cut
Carbon	Lower Towamensing	50.7	50.8	USA	Federally owned land	0	0.3	0.0	Open Cut
					Carbon County Subtotal	**50,859**	**134.2**	**58.4**	
Northampton	Lehigh	50.5	50.6	Pennsylvania Commonwealth	State owned land/ State Game Land No. 168	0	0.3	0.0	Open Cut
Northampton	Lehigh	50.8	52.5	Pennsylvania Commonwealth	State owned land/ State Game Land No. 168	8,889	29.8	10.2	Open Cut / Bore
Northampton	Lehigh	52.5	52.7	Pennsylvania Commonwealth	State owned land/ State Game Land No. 168	823	3.1	0.9	Open Cut
Northampton	Moore	52.9	53.1	Pennsylvania Commonwealth	State owned land/ State Game Land No. 168	926	2.8	1.1	Open Cut
Northampton	Moore	53.2	53.3	Pennsylvania Commonwealth	State owned land/ State Game Land No. 168	518	1.4	0.6	Open Cut
Northampton	Moore	57.9	57.9	Bath Borough Authority	Municipal owned land	135	0.4	0.2	Open Cut
Northampton	Bethlehem	68.0	68.1	Pennsylvania Commonwealth	State owned land	74	0.3	0.1	Open Cut
Northampton	Bethlehem	68.3	68.6	Pennsylvania Commonwealth	State owned land	1,858	5.5	2.1	Open Cut
Northampton	Bethlehem	68.9	69.4	Bethlehem Township	Township owned land	2,041	5.7	2.1	Open Cut
Northampton	Bethlehem	69.1	69.5	Pennsylvania Commonwealth	State owned land	635	1.9	1.0	Open Cut / Access Road
Northampton	Bethlehem	69.4	69.4	Bethlehem Township	Township owned land	0	0.0	0.0	Access Road
Northampton	Bethlehem	69.4	69.4	Bethlehem Township	Township owned land	0	0.0	0.0	Access Road
Northampton	Bethlehem	70.0	70.0	Bethlehem Township	Township owned land	0	0.0	0.0	Access Road
Northampton	Bethlehem	70.1	70.1	Bethlehem Township	Township owned land	0	0.2	0.0	Access Road
Northampton	Bethlehem	70.1	70.1	Bethlehem Township	Township owned land	76	0.1	0.1	HDD
Northampton	Bethlehem	70.6	70.7	Bethlehem Township	Township owned land	147	0.2	0.2	HDD
Northampton	Bethlehem	70.7	70.7	Pennsylvania Commonwealth	State owned land	115	0.1	0.1	HDD
Northampton	Bethlehem	70.7	70.7	Pennsylvania Commonwealth	State owned land	0	0.0	0.0	HDD
Northampton	Bethlehem	70.7	70.8	Easton City	Municipal owned land	516	0.6	0.6	HDD
					Northampton County Subtotal	**16,752**	**52.4**	**19.3**	
Bucks	Riegelsville	77.3	77.3	Pennsylvania Commonwealth Del River / Div Canal	State owned land/ Delaware Canal State Park	77	0.1	0.1	HDD
Bucks	Durham	77.3	77.3	Pennsylvania Commonwealth	State owned land/ Delaware Canal State Park	108	0.1	0.1	HDD
					Bucks County Subtotal	**185**	**0.2**	**0.2**	

Table G-14

Federal, State, County, Municipal Lands, and Public Conservation Areas That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Type of Area/Name of Associated Area	Land Ownership/Land Management	Approx. Crossing Length (feet)	Land Affected		Crossing Method
							Cont. (acres)	Oper. (acres)	
Hellertown Lateral									
None.									
PennEast Mainline – New Jersey									
Hunterdon	Holland	81.1	81.5	State of New Jersey- DEP / Gravel Hill Preserve	State of New Jersey- DEP / NJ Natural Lands Trust	1,589	5.4	1.8	Open Cut / Access Road
Hunterdon	Holland	81.5	81.8	State of New Jersey- DEP / Gravel Hill Preserve	State of New Jersey- DEP / NJ Natural Lands Trust	1,551	4.3	1.8	Open Cut
Hunterdon	Holland	81.8	81.8	State of New Jersey- DEP	State owned land	0	0.0	0.0	Open Cut
Hunterdon	Kingwood	93.4	93.7	Hunterdon Land Trust	County owned land	1,163	3.1	1.3	HDD / Open Cut
Hunterdon	Kingwood	93.7	93.7	Hunterdon Land Trust	County owned land	252	0.6	0.3	Open Cut
Hunterdon	Kingwood	93.7	93.7	Hunterdon Land Trust	County owned land	99	0.3	0.1	Open Cut
Hunterdon	Kingwood	93.7	93.8	Hunterdon Land Trust	County owned land	0	0.1	0.0	Open Cut
Hunterdon	West Amwell	102.9	103.0	State of New Jersey- DEP	State owned land	0	0.8	0.0	Open Cut
Hunterdon	West Amwell	103.7	103.8	State of New Jersey- DEP	State owned land	269	0.7	0.3	Open Cut
Hunterdon	Holland	81.1	81.5	State of New Jersey- DEP / Gravel Hill Preserve	State of New Jersey- DEP / NJ Natural Lands Trust	1,589	5.4	1.8	Open Cut / Access Road
Hunterdon	Holland	81.5	81.8	State of New Jersey- DEP / Gravel Hill Preserve	State of New Jersey- DEP / NJ Natural Lands Trust	1,551	4.3	1.8	Open Cut
Hunterdon	Holland	81.8	81.8	State of New Jersey- DEP	State owned land	0	0.0	0.0	Open Cut
Hunterdon	Kingwood	93.4	93.7	Hunterdon Land Trust/Muddy Run Preserve	County owned land	1,163	3.1	1.3	HDD / Open Cut
					Hunterdon County Subtotal	**4,924**	**15.1**	**5.7**	
Mercer	Hopewell	106.1	106.5	County Of Mercer	County owned land	1,670	4.1	1.9	HDD / Open Cut
Mercer	Hopewell	106.5	107.0	County Of Mercer / Ted F. Stiles Preserve at Baldpate Mountain	County owned land	2,571	5.4	3.0	HDD / Open Cut
Mercer	Hopewell	107.0	107.3	County of Mercer / Ted F. Stiles Preserve at Baldpate Mountain	County owned land	1,543	4.1	1.8	Open Cut
Mercer	Hopewell	107.0	107.0	County Of Mercer / Ted F. Stiles Preserve at Baldpate Mountain	County owned land	0	0.0	0.0	Open Cut

Table G-14

Federal, State, County, Municipal Lands, and Public Conservation Areas That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Type of Area/Name of Associated Area	Land Ownership/Land Management	Approx. Crossing Length (feet)	Land Affected		Crossing Method
							Cont. (acres)	Oper. (acres)	
Mercer	Hopewell	107.2	107.8	County Of Mercer / Ted F. Stiles Preserve at Baldpate Mountain	County owned land	2,826	9.4	3.2	Open Cut
Mercer	Hopewell	107.4	107.5	County of Mercer / Ted F. Stiles Preserve at Baldpate Mountain	County owned land	94	0.2	0.1	Open Cut
Mercer	Hopewell	107.8	108.2	State Of NJ Environ Protection / Ted F. Stiles Preserve at Baldpate Mountain	State owned land / County of Mercer	2,205	6.7	2.5	Open Cut / Access Road
Mercer	Hopewell	108.0	108.0	State Of NJ Environ Protection / Ted F. Stiles Preserve at Baldpate Mountain	State owned land / County of Mercer	0	0.2	0.0	Access Road
Mercer	Hopewell	108.2	108.5	NJ Dep & County of Mercer / Ted F. Stiles Preserve at Baldpate Mountain	State/County owned land	1,702	5.9	2.0	Open Cut
Mercer	Hopewell	110.5	110.8	Township Of Hopewell	Township owned land	1,740	5.4	2.0	Open Cut / Access Road
Mercer	Hopewell	110.8	111.3	Township Of Hopewell	Township owned land	2,231	7.5	2.6	HDD / Open Cut
Mercer	Hopewell	111.3	111.6	Township Of Hopewell	Township owned land	1,616	1.9	1.9	HDD
Mercer	Hopewell	112.1	112.3	Township Of Hopewell	Township owned land	438	1.8	0.5	HDD / Open Cut / Access Road
Mercer	Hopewell	112.9	113.3	Township Of Hopewell	Township owned land	1,662	5.1	2.0	Open Cut
Mercer	Hopewell	113.3	113.3	Township Of Hopewell	Township owned land	0	0.0	0.0	Open Cut
Mercer	Titusville	113.3	113.3	Township Of Hopewell	Township owned land	0	0.0	0.0	Open Cut
Mercer	Titusville	113.3	113.3	Township Of Hopewell	Township owned land	0	0.0	0.0	Open Cut
					Mercer County Subtotal	**20,297**	**57.6**	**23.3**	
Gilbert Lateral									
None.									
Lambertville Lateral									
Hunterdon	West Amwell	1.4	1.4	State Of New Jersey Dept Of Trans	State owned land	0	0.2	0.0	Access Road
					Project Total	**120,676**	**348.9**	**138.5**	

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
Pennsylvania Mainline										
ATWS-0003	0.2	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing and rugged topography / sloped construction.
ATWS-0004	0.3	Luzerne	1.1	0.0	0.0	1.1	0.0	0.0	0.0	ATWS is required for rugged topography and road crossing.
ATWS-0005	0.5	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0006	0.5	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0007	0.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0008	0.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0009	0.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0010	0.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0011	1.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0012	1.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0013	1.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0014	1.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0015	1.2	Luzerne	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0016	1.4	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0017	1.4	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0019	1.4	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0018	1.4	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0021	1.6	Luzerne	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, rugged topography / sloped construction and residential construction.
ATWS-0020	1.6	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation, road crossing, rugged topography / sloped construction and residential construction.
ATWS-0022	1.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and rugged topography / sloped construction.
ATWS-0024	1.6	Luzerne	3.0	0.0	0.0	2.6	0.0	0.0	0.3	ATWS is required for road crossing, rugged topography / sloped construction, topsoil segregation, and side bend construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0023	1.6	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.1	ATWS is required for rugged topography / sloped construction, topsoil segregation, and side bend construction.
ATWS-0025	1.9	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and side bend construction.
ATWS-0026	2.1	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0028	2.1	Luzerne	1.2	0.0	0.0	1.2	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0027	2.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0029	2.5	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0030	2.5	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0031	2.5	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0032	2.6	Luzerne	1.5	0.0	0.0	1.5	0.0	0.0	0.0	ATWS is required for stream crossing, rugged topography / sloped construction and foreign pipeline crossing.
ATWS-0033	2.8	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and foreign pipeline crossing.
ATWS-0034	2.8	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and foreign pipeline crossing.
ATWS-0035	2.9	Luzerne	0.9	0.7	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, foreign pipeline crossing, topsoil segregation and road crossing.
ATWS-0036	3.0	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for rugged topography / sloped construction, topsoil segregation and road crossing.
ATWS-0038	3.0	Luzerne	0.2	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for rugged topography / sloped construction, road crossing, wetland crossing and stream crossing.
ATWS-0037	3.0	Luzerne	0.4	0.0	0.0	0.1	0.3	0.0	0.0	ATWS is required for rugged topography / sloped construction, road crossing, wetland crossing and stream crossing.
ATWS-0039	3.1	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0040	3.2	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0041	3.4	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0042	3.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0043	3.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0044	3.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0046	3.6	Luzerne	1.9	0.0	0.1	1.9	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0045	3.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0047	3.9	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for forested construction
ATWS-0048	4.0	Luzerne	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0049	4.2	Luzerne	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing.
ATWS-0050	4.3	Luzerne	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and residential construction.
ATWS-0051	4.3	Luzerne	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and wetland crossing.
ATWS-0053	4.3	Luzerne	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and wetland crossing.
ATWS-1109	4.3	Luzerne	0.2	0.0	0.0	0.2	0.1	0.0	0.0	ATWS is required for access to Auburn and Leidy Interconnects
ATWS-0018.01	4.3	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-1108	4.5	Luzerne	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for access to Auburn and Leidy Interconnects
ATWS-0054	4.5	Luzerne	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for road crossing.
ATWS-0055	4.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0056	4.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0039.01	4.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0058	4.7	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0059	5.0	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0060	5.0	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography
ATWS-0061	5.0	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography
ATWS-0062	5.1	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography
ATWS-0063	5.4	Luzerne	0.4	0.0	0.0	0.1	0.0	0.0	0.3	ATWS is required for road crossing.
ATWS-0064	5.4	Luzerne	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing.
ATWS-0065	5.4	Luzerne	0.4	0.0	0.0	0.2	0.0	0.0	0.2	ATWS is required for road crossing and stream crossing.
ATWS-0066	5.5	Luzerne	0.4	0.0	0.0	0.1	0.0	0.0	0.2	ATWS is required for road crossing and stream crossing.
ATWS-0067	5.7	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0068	5.8	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0069	5.8	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0070	5.8	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0071	5.9	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0072	5.9	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing.
ATWS-0074	5.9	Luzerne	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and road crossing.
ATWS-0075	5.9	Luzerne	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and road crossing.
ATWS-0073	5.9	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0076	6.0	Luzerne	0.3	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0077	6.0	Luzerne	0.6	0.4	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation.
ATWS-0078	6.2	Luzerne	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0079	6.3	Luzerne	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0080	6.3	Luzerne	0.3	0.2	0.1	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0081	6.3	Luzerne	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0082	6.4	Luzerne	0.5	0.0	0.0	0.0	0.4	0.0	0.0	ATWS is required for topsoil segregation and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0083	6.4	Luzerne	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing.
ATWS-0085	6.5	Luzerne	0.8	0.5	0.1	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0084	6.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0086	6.5	Luzerne	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0088	6.6	Luzerne	6.0	2.2	0.0	1.1	0.0	2.7	0.0	ATWS is required for topsoil segregation, foreign pipeline crossing, side bend construction, and major river.
ATWS-0087	6.6	Luzerne	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, foreign pipeline crossing and side bend construction.
ATWS-1111	6.9	Luzerne	4.2	0.0	0.0	1.8	0.0	2.4	0.0	ATWS is required for major river crossing.
ATWS-1110	7.0	Luzerne	9.2	1.3	0.2	1.9	0.0	5.7	0.0	ATWS is required for major river crossing.
ATWS-0089	7.3	Luzerne	1.0	0.0	0.0	0.2	0.7	0.0	0.0	ATWS is required for road crossing.
ATWS-0090	7.3	Luzerne	1.9	0.0	0.0	0.3	1.6	0.0	0.0	ATWS is required for major river, road crossing and side bend construction.
ATWS-0091	7.8	Luzerne	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for side bend construction and wetland crossing.
ATWS-0092	8.0	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0093	8.1	Luzerne	0.4	0.0	0.0	0.3	0.0	0.0	0.1	ATWS is required for road crossing, side bend construction and foreign pipeline crossing.
ATWS-0094	8.1	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing and foreign pipeline crossing.
ATWS-0095	8.1	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing, foreign pipeline crossing, topsoil segregation, and residential construction.
ATWS-0096	8.1	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for foreign pipeline crossing, topsoil segregation and road crossing.
ATWS-0098	8.2	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, and residential construction.
ATWS-0097	8.2	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, and residential construction.
ATWS-0099	8.2	Luzerne	0.6	0.1	0.0	0.1	0.0	0.0	0.3	ATWS is required for topsoil segregation, rugged topography / sloped construction and stream crossing.
ATWS-0100	8.3	Luzerne	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0102	8.4	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for stream crossing.
ATWS-0101	8.4	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0103	8.5	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road.
ATWS-0104	8.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for residential construction.
ATWS-0105	8.6	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road.
ATWS-0105.01	8.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for access road.
ATWS-0107	8.8	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road.
ATWS-1144	8.9	Luzerne	1.2	0.0	0.1	0.7	0.4	0.0	0.0	ATWS is required for side bend construction.
ATWS-1145	9.1	Luzerne	0.5	0.0	0.1	0.1	0.1	0.0	0.2	ATWS is required for access road, road crossing, and side bend construction.
ATWS-1146	9.1	Luzerne	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1147	9.2	Luzerne	0.3	0.0	0.3	0.0	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, side bend construction.
ATWS-1148	9.4	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-1149	9.4	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-1150	9.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and power line crossing.
ATWS-1151	9.7	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for access road.
ATWS-1152	9.8	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for RR crossing and sloped construction.
ATWS-1153	9.8	Luzerne	0.2	0.0	0.1	0.2	0.0	0.0	0.0	ATWS is required for road crossing and sloped construction.
ATWS-1154	10.0	Luzerne	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1155	10.1	Luzerne	0.1	0.0	0.9	0.0	0.0	0.0	0.0	ATWS is required for HDD Construction.
ATWS-1156	10.7	Luzerne	0.7	0.0	0.0	0.7	0.0	0.0	0.0	ATWS is required for HDD Construction.
ATWS-1157	10.7	Luzerne	0.3	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for HDD Construction.
ATWS-1158	10.8	Luzerne	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for sloped construction, stream crossing, and side bend construction.
ATWS-1159	11.0	Luzerne	1.1	0.0	0.0	1.1	0.0	0.0	0.0	ATWS is required for sloped construction, stream crossing, and rugged topography.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1160	11.3	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for sloped construction, stream crossing, road crossing
ATWS-1161	11.3	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for sloped construction, stream crossing, road crossing
ATWS-1162	11.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for sloped construction, stream crossing, road crossing
ATWS-1163	11.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for sloped construction, stream crossing, road crossing
ATWS-1164	11.5	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for steam crossing and sloped construction.
ATWS-1165	11.5	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for steam crossing and sloped construction.
ATWS-1166	11.6	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for steam crossings and sloped construction.
ATWS-1167	11.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for steam crossings and sloped construction.
ATWS-1168	11.7	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and RR crossing.
ATWS-1169	11.7	Luzerne	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and RR crossing.
ATWS-1170	11.7	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for RR crossing.
ATWS-1171	11.7	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for RR crossing.
ATWS-1172	12.0	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for gas line crossing, wetland proximity, and rugged topography.
ATWS-1173	12.01	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for gas line crossing and side bend construction.
ATWS-1174	12.3	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for gas line crossing, side bend construction, and side slope construction.
ATWS-0149	12.8	Luzerne	1.1	0.0	0.0	0.9	0.2	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0150	13.0	Luzerne	0.2	0.0	0.0	0.1	0.0	0.0	0.1	ATWS is required for road crossing and residential construction.
ATWS-0151	13.0	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0152	13.0	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0153	13.0	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0154	13.1	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation and stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0155	13.1	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing.
ATWS-0156	13.1	Luzerne	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and stream crossing.
ATWS-0157	13.2	Luzerne	0.9	0.0	0.0	0.0	0.0	0.0	0.9	ATWS is required for road crossing and stream crossing.
ATWS-0158	13.3	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0159	13.3	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0160	13.3	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0161	13.3	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, and access road.
ATWS-0119	13.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and wetland crossing.
ATWS-0163	13.6	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.
ATWS-0164	13.7	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, stream crossing and wetland crossing.
ATWS-0165	13.7	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, stream crossing and wetland crossing.
ATWS-0166	13.9	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.
ATWS-0167	13.9	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.
ATWS-0168	14.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and wetland crossing.
ATWS-0169	14.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0170	14.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0171	14.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, access road and stream crossing.
ATWS-0172	14.7	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0173	14.8	Luzerne	1.0	0.0	0.0	1.0	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0174	15.0	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0175	15.6	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and side bend construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0176	15.7	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and side bend construction.
ATWS-0177	16.0	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and wetland crossing and stream crossing.
ATWS-0178	16.2	Luzerne	0.7	0.0	0.0	0.7	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and wetland crossing and stream crossing.
ATWS-0179	16.4	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and wetland crossing and stream crossing.
ATWS-0180	16.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0181	16.6	Luzerne	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for access road and stream crossing.
ATWS-0183	16.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.
ATWS-0182	16.6	Luzerne	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for access road and stream crossing.
ATWS-0184	16.7	Luzerne	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.
ATWS-0185	16.8	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing.
ATWS-0186	16.9	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0187	17.3	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0188	17.5	Luzerne	1.1	0.0	0.0	1.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0189	17.7	Luzerne	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing, wetland crossing, and stream crossing.
ATWS-0190	17.8	Luzerne	0.5	0.0	0.0	0.4	0.0	0.0	0.1	ATWS is required for stream crossing, road crossing and rugged topography / sloped construction.
ATWS-0191	18.3	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and stream crossing.
ATWS-0192	18.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and stream crossing.
ATWS-0193	18.6	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and side bend construction.
ATWS-0194	18.6	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and side bend construction.
ATWS-0195	19.0	Luzerne	0.8	0.0	0.0	0.8	0.0	0.0	0.0	ATWS is required for stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0196	19.5	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0197	19.6	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing.
ATWS-0198	19.6	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing and side bend construction.
ATWS-0199	19.7	Luzerne	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0200	20.0	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0201	20.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0202	20.2	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0203	20.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing and access road.
ATWS-0204	20.4	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing.
ATWS-0205	21.1	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0206	21.2	Luzerne	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0207	22.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0208	22.6	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0209	22.7	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0210	22.7	Luzerne	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0211	22.8	Luzerne	1.3	0.0	0.0	1.3	0.0	0.0	0.0	ATWS is required for major river and rugged topography / sloped construction.
ATWS-0212	23.1	Carbon	4.7	0.0	0.0	4.7	0.0	0.0	0.0	ATWS is required for major river and rugged topography / sloped construction.
ATWS-0213	24.1	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0214	24.3	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0215	25.0	Carbon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for access road.
ATWS-0216	25.0	Carbon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for access road.
ATWS-0217	25.2	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0218	25.2	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0219	26.1	Carbon	0.3	0.0	0.2	0.2	0.0	0.0	0.0	ATWS is required for side bend construction.
ATWS-0220	26.1	Carbon	0.7	0.0	0.0	0.7	0.0	0.0	0.0	ATWS is required for side bend construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0221	26.3	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0222	26.3	Carbon	0.7	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for road crossing, side bend construction and wetland crossing.
ATWS-0223	26.4	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0224	26.5	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0225	26.7	Carbon	1.8	0.0	0.0	1.8	0.0	0.0	0.0	ATWS is required for stream crossing, road crossing, and wetland crossing.
ATWS-0226	26.9	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and pipeline crossing.
ATWS-0227	27.3	Carbon	1.8	0.0	0.0	1.8	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0228	27.6	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0229	27.9	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0230	27.9	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for wetland crossing and side bend construction.
ATWS-0231	29.0	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for side bend construction.
ATWS-0232	29.0	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for side bend construction.
ATWS-0233	29.4	Carbon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0234	29.7	Carbon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0235	30.2	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0236	30.4	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0237	30.5	Carbon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0238	31.2	Carbon	0.6	0.1	0.0	0.4	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and topsoil segregation.
ATWS-0239	31.6	Carbon	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0240	31.7	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0241	31.9	Carbon	0.3	0.0	0.0	0.0	0.3	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0242	32.1	Carbon	0.3	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation, road crossing, and stream crossing.
ATWS-0243	32.2	Carbon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0244	32.7	Carbon	0.3	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for access road.
ATWS-0245	32.7	Carbon	0.4	0.0	0.0	0.1	0.2	0.0	0.0	ATWS is required for rugged topography, stream crossing, and wetland crossing.
ATWS-0246	33.0	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography, stream crossing, and wetland crossing.
ATWS-0247	33.1	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography, stream crossing, and wetland crossing.
ATWS-0248	33.3	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0249	33.4	Carbon	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for stream crossing, road crossing, and wetland crossing.
ATWS-0250	33.7	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, wetland crossing and stream crossing.
ATWS-0251	33.8	Carbon	1.2	0.0	0.0	1.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0252	34.3	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0253	34.8	Carbon	0.2	0.0	0.0	0.1	0.0	0.0	0.1	ATWS is required for wetland crossing, stream crossing and side bend construction.
ATWS-0254	34.8	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for side bend construction.
ATWS-0255	35.3	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and side bend construction.
ATWS-0256	35.3	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and side bend construction.
ATWS-0257	35.4	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0258	35.4	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0259	35.5	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, side bend construction and pipeline crossing.
ATWS-0260	35.6	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and pipeline crossing.
ATWS-0261	35.6	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing and pipeline crossing.
ATWS-0262	35.6	Carbon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and pipeline crossing.
ATWS-0263	35.6	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation and pipeline crossing.
ATWS-0264	35.6	Carbon	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation and pipeline crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0265	35.7	Carbon	0.5	0.0	0.0	0.1	0.4	0.0	0.0	ATWS is required for topsoil segregation, side bend construction, and residential construction.
ATWS-0266	35.8	Carbon	0.3	0.0	0.0	0.0	0.3	0.0	0.0	ATWS is required for access road, topsoil segregation, side bend construction, and residential construction.
ATWS-0267	36.0	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0268	36.1	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0269	36.4	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0270	36.6	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0271	36.6	Carbon	1.3	0.0	0.0	1.2	0.1	0.0	0.0	ATWS is required for wetland crossing, stream crossing, side bend construction, and pipeline crossing.
ATWS-0272	36.8	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0273	37.1	Carbon	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing and access road.
ATWS-0274	37.1	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0275	37.2	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0276	37.2	Carbon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0277	37.4	Carbon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and pipeline crossing.
ATWS-0278	37.4	Carbon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and pipeline crossing.
ATWS-0279	37.5	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and pipeline crossing.
ATWS-0280	37.5	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and pipeline crossing.
ATWS-0281	37.7	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0282	37.7	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing and residential construction.
ATWS-0283	37.8	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0284	37.8	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and residential construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0285	38.0	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and side bend construction.
ATWS-0286	38.1	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0287	38.3	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0288	38.3	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0289	38.4	Carbon	3.4	0.0	0.0	3.4	0.0	0.0	0.0	ATWS is required for side bend construction.
ATWS-0290	39.5	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0291	39.6	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, rugged topography / sloped construction and pipeline crossing.
ATWS-0292	39.7	Carbon	1.7	0.0	0.0	1.7	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, pipeline crossing and stream crossing.
ATWS-0293	40.3	Carbon	1.3	0.0	0.0	0.7	0.6	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0294	40.7	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0295	40.7	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for road crossing, side bend construction and pipeline crossing.
ATWS-0296	40.8	Carbon	0.7	0.0	0.0	0.7	0.0	0.0	0.0	ATWS is required for pipeline crossing and road crossing.
ATWS-0297	40.8	Carbon	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for pipeline crossing and road crossing.
ATWS-0298	41.0	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0299	41.1	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0300	41.1	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0301	41.1	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0302	41.2	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0303	41.2	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0304	41.3	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0305	41.3	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0306	41.3	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0307	41.3	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0308	41.5	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0309	41.6	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0310	41.6	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0311	41.6	Carbon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for stream crossing, rugged topography / sloped construction and road crossing.
ATWS-0312	41.7	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing.
ATWS-0313	41.7	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0314	41.7	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0315	42.0	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0316	42.0	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0317	42.0	Carbon	0.3	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0318	42.0	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0319	42.1	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, rugged topography / sloped construction and side bend construction.
ATWS-0320	42.1	Carbon	1.7	0.0	0.0	1.7	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0321	42.7	Carbon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0322	42.7	Carbon	0.3	0.1	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation and road crossing.
ATWS-0323	42.8	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0324	42.8	Carbon	3.8	3.4	0.0	0.1	0.2	0.0	0.1	ATWS is required for topsoil segregation, road crossing and rugged topography / sloped construction.
ATWS-0325	43.1	Carbon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0326	43.1	Carbon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, road crossing and waterbody.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0327	43.1	Carbon	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, road crossing and waterbody.
ATWS-0328	43.2	Carbon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for waterbody.
ATWS-0329	44.4	Carbon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for HDD construction and road crossing.
ATWS-0330	44.4	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for HDD construction and road crossing.
ATWS-1140	44.5	Carbon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for access road and road crossing.
ATWS-1141	44.6	Carbon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for road crossing and bend construction.
ATWS-1142	44.6	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1143	44.6	Carbon	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0337	44.8	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, side bend construction and road crossing.
ATWS-0338	44.8	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, road crossing and stream crossing.
ATWS-0339	44.9	Carbon	0.2	0.0	0.1	0.1	0.0	0.0	0.0	ATWS is required for road crossing, rugged topography / sloped construction and stream crossing.
ATWS-0340	44.9	Carbon	0.6	0.0	0.0	0.3	0.0	0.0	0.3	ATWS is required for road crossing, rugged topography / sloped construction and topsoil segregation.
ATWS-0341	45.0	Carbon	0.2	0.0	0.0	0.2	0.1	0.0	0.0	ATWS is required for wetland crossing, stream crossing, road crossing, and residential construction.
ATWS-0342	45.0	Carbon	0.2	0.0	0.0	0.0	0.1	0.0	0.1	ATWS is required for wetland crossing, stream crossing, road crossing, and access road.
ATWS-0343	45.1	Carbon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and road crossing.
ATWS-0344	45.1	Carbon	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for wetland crossing, stream crossing, and road crossing.
ATWS-0345	45.1	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and road crossing.
ATWS-0346	45.1	Carbon	1.7	0.2	0.0	1.3	0.2	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0347	45.3	Carbon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction, road crossing and topsoil segregation.
ATWS-0348	45.4	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0349	45.4	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0350	45.5	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing.
ATWS-0351	45.5	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing.
ATWS-0352	45.6	Carbon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, stream crossing and rugged topography / sloped construction.
ATWS-0353	45.6	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, stream crossing and rugged topography / sloped construction.
ATWS-0354	45.6	Carbon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, stream crossing and rugged topography / sloped construction.
ATWS-0355	45.8	Carbon	1.2	1.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0356	46.0	Carbon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0357	46.0	Carbon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0358	46.1	Carbon	3.1	2.3	0.0	0.2	0.6	0.0	0.0	ATWS is required for topsoil segregation, road crossing, rugged topography / sloped construction and side bend construction.
ATWS-0359	47.0	Carbon	0.8	0.5	0.0	0.4	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0360	47.1	Carbon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0361	47.1	Carbon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0362	47.1	Carbon	0.6	0.4	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0363	47.4	Carbon	1.0	0.0	0.0	1.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0364	47.6	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0365	47.7	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0366	47.7	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0367	47.7	Carbon	1.4	0.5	0.0	0.9	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, topsoil segregation and wetland crossing.
ATWS-0368	48.1	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing.
ATWS-0369	48.1	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0370	48.1	Carbon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and access road.
ATWS-0371	48.2	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction stream crossing and wetland crossing.
ATWS-0372	48.2	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction stream crossing and wetland crossing.
ATWS-0373	48.6	Carbon	0.3	0.0	0.0	0.3	0.1	0.0	0.0	ATWS is required for topsoil segregation and rugged topography / sloped construction.
ATWS-0374	48.7	Carbon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and rugged topography / sloped construction.
ATWS-0375	48.9	Carbon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0376	49.0	Carbon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation and side bend construction.
ATWS-0377	49.0	Carbon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation and side bend construction.
ATWS-0378	49.5	Carbon	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation and side bend construction.
ATWS-0379	49.5	Carbon	0.7	0.0	0.7	0.0	0.0	0.0	0.0	ATWS is required for side bend construction and commercial site construction.
ATWS-0380	49.6	Carbon	0.5	0.0	0.5	0.0	0.0	0.0	0.0	ATWS is required for side bend construction and commercial site construction.
ATWS-0381	49.7	Carbon	0.7	0.0	0.7	0.0	0.0	0.0	0.0	ATWS is required for road crossing and commercial site construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0382	50.2	Carbon	0.9	0.0	0.8	0.1	0.0	0.0	0.0	ATWS is required for residential construction.
ATWS-0383	50.5	Carbon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0384	51.0	Carbon	0.7	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for road crossing, side bend construction, and facility site construction.
ATWS-0385	51.0	Carbon	0.9	0.0	0.0	0.9	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0386	51.1	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0387	51.2	Northampton	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0388	51.2	Northampton	1.3	0.0	0.0	1.3	0.0	0.0	0.0	ATWS is required for pipeline bend
ATWS-0389	51.4	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for pipeline bend
ATWS-0390	51.5	Northampton	5.6	0.0	0.0	5.6	0.0	0.0	0.0	ATWS is required for pipeline bend and rugged topography / sloped construction
ATWS-0391	52.4	Northampton	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for pipeline bend and rugged topography / sloped construction
ATWS-0394	52.5	Northampton	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for pipeline bend and rugged topography / sloped construction
ATWS-0392	52.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for access road
ATWS-0393	52.6	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for access road
ATWS-0395	52.6	Northampton	3.3	0.0	0.0	3.3	0.0	0.0	0.0	ATWS is required for pipeline bend and rugged topography / sloped construction
ATWS-0396	52.8	Northampton	1.0	0.0	0.0	1.0	0.0	0.0	0.0	ATWS is required for side bend construction
ATWS-0397	53.2	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for side bend construction and stream crossing
ATWS-0398	53.2	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for side bend construction and stream crossing
ATWS-0399	53.3	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for side bend construction and stream crossing
ATWS-0400	53.3	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for side bend construction and stream crossing
ATWS-0401	53.4	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0402	53.4	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0403	53.4	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0404	53.4	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing
ATWS-0405	53.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and side bend construction
ATWS-0406	53.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and side bend construction
ATWS-0407	53.6	Northampton	0.3	0.2	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0408	53.7	Northampton	1.3	1.1	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0409	54.0	Northampton	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0410	54.1	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0411	54.1	Northampton	0.3	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0412	54.2	Northampton	0.4	0.3	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, pipeline bend and wetland crossing
ATWS-0413	54.3	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing
ATWS-0414	54.3	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing
ATWS-0415	54.4	Northampton	0.8	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing and rugged topography / sloped construction
ATWS-0416	54.6	Northampton	1.0	1.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, pipeline bend, road crossing and rugged topography / sloped construction
ATWS-0417	54.7	Northampton	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0418	54.8	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and road crossing
ATWS-0419	54.8	Northampton	0.3	0.0	0.0	0.0	0.0	0.0	0.3	ATWS is required for topsoil segregation and road crossing
ATWS-0420	54.8	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and road crossing
ATWS-0422	54.8	Northampton	2.5	0.3	0.0	2.1	0.0	0.0	0.1	ATWS is required for topsoil segregation, road crossing, pipeline bend and rugged topography / sloped construction

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0421	55.0	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, pipeline bend and rugged topography / sloped construction
ATWS-0423	55.3	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, pipeline bend, road crossing and rugged topography / sloped construction
ATWS-0425	55.3	Northampton	1.0	1.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, pipeline bend and rugged topography / sloped construction
ATWS-0424	55.3	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and rugged topography / sloped construction
ATWS-0426	55.4	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0427	55.5	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0428	55.5	Northampton	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and pipeline bend
ATWS-0429	55.7	Northampton	1.0	0.6	0.0	0.4	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and rugged topography / sloped construction
ATWS-0430	55.8	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing / rugged topography / sloped construction
ATWS-0431	55.9	Northampton	0.2	0.0	0.1	0.1	0.0	0.0	0.0	ATWS is required for stream crossing / rugged topography / sloped construction
ATWS-0432	55.9	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing / rugged topography / sloped construction
ATWS-0433	56.0	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road, stream crossing / rugged topography / sloped construction
ATWS-0434	56.0	Northampton	0.3	0.1	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, side bend construction and topsoil segregation
ATWS-0435	56.1	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-0436	56.2	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0437	56.3	Northampton	1.4	1.2	0.0	0.1	0.0	0.0	0.1	ATWS is required for topsoil segregation, pipeline bend, road crossing and rugged topography / sloped construction
ATWS-0438	56.6	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and pipeline bend
ATWS-0439	56.6	Northampton	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for road crossing and stream crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0440	56.6	Northampton	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing
ATWS-0441	56.7	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0442	56.7	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0443	56.8	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and pipeline bend
ATWS-0444	56.9	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and rugged topography / sloped construction
ATWS-0445	57.0	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and rugged topography / sloped construction
ATWS-0446	57.0	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and rugged topography / sloped construction
ATWS-0447	57.0	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and rugged topography / sloped construction
ATWS-0448	57.0	Northampton	1.5	1.4	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, pipeline bend and rugged topography / sloped construction
ATWS-0449	57.4	Northampton	0.8	0.6	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, pipeline bend and rugged topography / sloped construction
ATWS-0450	57.5	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and pipeline bend
ATWS-0451	57.6	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.1	ATWS is required for road crossing
ATWS-0452	57.6	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing and residential construction
ATWS-0453	57.6	Northampton	0.8	0.4	0.0	0.0	0.0	0.0	0.4	ATWS is required for residential construction, topsoil segregation, road crossing and rugged topography / sloped construction
ATWS-0454	57.8	Northampton	0.2	0.1	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation and road crossing
ATWS-0455	57.8	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0456	57.8	Northampton	0.8	0.8	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0457	58.1	Northampton	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0458	58.1	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0459	58.2	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and rugged topography / sloped construction
ATWS-0460	58.2	Northampton	1.8	1.6	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing, topsoil segregation and rugged topography / sloped construction
ATWS-0461	58.4	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0462	58.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0463	58.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0464	58.6	Northampton	1.6	1.3	0.0	0.0	0.0	0.0	0.3	ATWS is required for topsoil segregation, pipeline bend, road crossing and rugged topography / sloped construction
ATWS-0465	58.9	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0466	58.9	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0467	58.9	Northampton	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and stream crossing
ATWS-0468	59.0	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and road crossing
ATWS-0469	59.0	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and road crossing
ATWS-0470	59.0	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and road crossing
ATWS-0471	59.1	Northampton	0.6	0.3	0.0	0.3	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0472	59.2	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and road crossing
ATWS-0473	59.2	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing and stream crossing
ATWS-0474	59.2	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing and stream crossing
ATWS-0475	59.3	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and rugged topography / sloped construction
ATWS-0476	59.3	Northampton	5.9	2.2	0.7	2.6	0.0	0.0	0.4	ATWS is required for stream crossing, wetland crossing, topsoil segregation, and rugged topography / sloped construction

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0477	60.2	Northampton	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and rugged topography / sloped construction
ATWS-0478	60.3	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and road crossing
ATWS-0479	60.3	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and road crossing
ATWS-0481	60.3	Northampton	1.4	1.1	0.0	0.3	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0480	60.3	Northampton	0.4	0.1	0.0	0.3	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0482	60.6	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and stream crossing
ATWS-0483	60.6	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing, stream crossing and wetland crossing
ATWS-0484	60.6	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing and wetland crossing
ATWS-0485	60.7	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing
ATWS-0486	60.7	Northampton	2.1	1.8	0.0	0.3	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and topsoil segregation
ATWS-0487	61.4	Northampton	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, and road crossing
ATWS-0488	61.4	Northampton	0.2	0.1	0.0	0.1	0.0	0.0	0.1	ATWS is required for topsoil segregation, road crossing, and stream crossing.
ATWS-0489	61.4	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0490	61.4	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing.
ATWS-0491	61.5	Northampton	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and road crossing.
ATWS-0493	61.5	Northampton	2.0	1.8	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing, topsoil segregation and road crossing.
ATWS-0492	61.7	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction.
ATWS-0494	62.0	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0495	62.0	Northampton	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and side bend construction.
ATWS-0496	62.0	Northampton	0.6	0.3	0.0	0.1	0.0	0.0	0.2	ATWS is required for topsoil segregation, road crossing and side bend construction.
ATWS-0497	62.1	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0498	62.2	Northampton	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and side bend construction.
ATWS-0499	62.2	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing and side bend construction.
ATWS-0500	62.2	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation, residential construction, and stream crossing.
ATWS-0501	62.3	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for stream crossing and road crossing.
ATWS-0502	62.3	Northampton	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0503	62.3	Northampton	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0504	62.3	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0505	62.3	Northampton	0.5	0.5	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0506	62.5	Northampton	1.0	0.7	0.3	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, side bend construction, road crossing, and stream crossing.
ATWS-0507	62.7	Northampton	0.4	0.0	0.4	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0508	62.8	Northampton	0.5	0.0	0.5	0.0	0.0	0.0	0.0	ATWS is required for access road, stream crossing, and railroad crossing
ATWS-0509	62.8	Northampton	0.3	0.0	0.0	0.0	0.3	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and railroad crossing.
ATWS-0510	62.8	Northampton	2.3	1.9	0.0	0.1	0.3	0.0	0.0	ATWS is required for rugged topography/sloped construction topsoil segregation, stream crossing and railroad crossing.
ATWS-0511	63.3	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road.
ATWS-0512	63.5	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0513	63.6	Northampton	0.4	0.2	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction topsoil segregation, side bend construction and road crossing.
ATWS-0514	63.6	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction topsoil segregation, side bend construction and road crossing.
ATWS-0515	63.6	Northampton	0.5	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0516	63.6	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0517	63.7	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing, topsoil segregation, stream crossing, and side bend construction.
ATWS-0518	63.7	Northampton	0.4	0.1	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing, topsoil segregation, stream crossing, and side bend construction.
ATWS-0519	63.7	Northampton	0.4	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, stream crossing, and side bend construction.
ATWS-0520	63.8	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0521	63.9	Northampton	0.4	0.0	0.0	0.2	0.2	0.0	0.0	ATWS is required for side bend construction and topsoil segregation.
ATWS-0522	63.9	Northampton	0.8	0.0	0.0	0.6	0.1	0.0	0.1	ATWS is required for side bend construction and topsoil segregation.
ATWS-0523	64.1	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road, side bend construction, and topsoil segregation.
ATWS-0524	64.2	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road, side bend construction, and topsoil segregation.
ATWS-0525	64.2	Northampton	0.5	0.0	0.0	0.0	0.0	0.0	0.5	ATWS is required for topsoil segregation, road crossing, and wetland crossing.
ATWS-0526	64.4	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and side bend construction.
ATWS-0527	64.4	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and wetland crossing.
ATWS-0528	64.5	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and pipeline crossing.
ATWS-0529	64.5	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and pipeline crossing.
ATWS-0530	64.5	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and pipeline crossing.
ATWS-0531	64.6	Northampton	1.1	1.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and pipeline crossing.
ATWS-0532	65.0	Northampton	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, side bend construction, and road crossing.
ATWS-0533	65.0	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and road crossing.
ATWS-0534	65.0	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and road crossing.
ATWS-0535	65.1	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0536	65.1	Northampton	0.4	0.3	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation and road crossing.
ATWS-0537	65.1	Northampton	0.8	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0538	65.4	Northampton	1.6	1.4	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation, side bend construction, and road crossing.
ATWS-0539	65.7	Northampton	0.4	0.3	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation, side bend construction, and road crossing.
ATWS-0540	65.8	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0541	65.8	Northampton	1.3	1.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction.
ATWS-0542	66.3	Northampton	1.6	1.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction.
ATWS-0543	66.7	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0544	66.7	Northampton	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0545	66.8	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0546	66.2	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0547	66.9	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0549	66.9	Northampton	2.1	2.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0548	67.0	Northampton	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and access road.
ATWS-0550	67.5	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0551	67.6	Northampton	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and foreign pipeline crossing.
ATWS-0552	67.6	Northampton	0.6	0.3	0.1	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, side bend construction, and foreign pipeline crossing.
ATWS-0553	67.7	Northampton	0.8	0.0	0.8	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, side bend construction, and foreign pipeline crossing.
ATWS-0554	67.9	Northampton	1.3	0.8	0.5	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0555	68.2	Northampton	0.5	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0556	68.3	Northampton	0.2	0.1	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation and road crossing.
ATWS-0557	68.4	Northampton	0.6	0.0	0.0	0.1	0.5	0.0	0.0	ATWS is required for road crossing and side bend construction.
ATWS-0559	68.4	Northampton	0.7	0.0	0.0	0.0	0.7	0.0	0.0	ATWS is required for road crossing.
ATWS-0558	68.5	Northampton	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for topsoil segregation and residential construction.
ATWS-0560	68.7	Northampton	0.6	0.0	0.0	0.0	0.6	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and residential construction.
ATWS-0561	68.8	Northampton	0.2	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road, topsoil segregation, road crossing, and residential construction.
ATWS-0562	68.9	Northampton	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for access road, road crossing, and residential construction.
ATWS-0563	68.9	Northampton	0.2	0.0	0.1	0.0	0.0	0.0	0.1	ATWS is required for residential construction and side bend construction.
ATWS-0564	68.9	Northampton	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for residential construction, side bend construction, and road crossing.
ATWS-0565	68.9	Northampton	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for residential construction, side bend construction, and road crossing.
ATWS-0566	69.0	Northampton	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for side bend construction, road crossing, and residential construction.
ATWS-0567	69.0	Northampton	1.7	0.0	0.1	0.4	1.2	0.0	0.0	ATWS is required for residential construction, side bend construction, and topsoil segregation.
ATWS-0568	69.7	Northampton	0.4	0.0	0.3	0.0	0.1	0.0	0.0	ATWS is required for residential construction and side bend construction.
ATWS-0569	69.7	Northampton	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for side bend construction, road crossing, and parking lot crossing.
ATWS-0570	69.8	Northampton	0.8	0.0	0.8	0.0	0.0	0.0	0.0	ATWS is required for road crossing, HDD construction and parking lot crossing.
ATWS-0571	69.9	Northampton	0.6	0.0	0.5	0.0	0.1	0.0	0.0	ATWS is required for road crossing, HDD construction and parking lot crossing.
ATWS-0572	70.4	Northampton	2.2	2.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, major river, road crossing, and HDD construction.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0572.01	70.5	Northampton	1.7	1.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, major river, road crossing, and HDD construction.
ATWS-0574	70.5	Northampton	1.0	1.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, major river, road crossing, and HDD construction.
ATWS-0573	70.5	Northampton	2.8	2.8	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, major river, road crossing, and HDD construction.
ATWS-0576	71.3	Northampton	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for major river, road crossing, HDD construction and rugged topography / sloped construction.
ATWS-0577	71.3	Northampton	0.7	0.0	0.0	0.4	0.3	0.0	0.0	ATWS is required for major river, road crossing, HDD construction, stream crossing, and rugged topography / sloped construction.
ATWS-0578	71.4	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0579	71.4	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-0598	72.0	Northampton	0.7	0.5	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, wetland crossing, and stream crossing.
ATWS-0599	72.0	Northampton	1.1	0.7	0.0	0.2	0.0	0.0	0.2	ATWS is required for topsoil segregation, road crossing, wetland crossing, and stream crossing.
ATWS-0600	72.2	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0601	72.3	Northampton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0602	72.3	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0603	72.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0604	72.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0605	72.6	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0606	72.7	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, wetland crossing and stream crossing.
ATWS-0607	72.9	Northampton	0.3	0.0	0.0	0.2	0.1	0.0	0.0	ATWS is required for access road, wetland crossing, and stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0608	73.0	Northampton	0.6	0.0	0.0	0.0	0.0	0.0	0.6	ATWS is required for topsoil segregation, wetland crossing, stream crossing, and road crossing.
ATWS-0609	73.1	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, stream crossing, and road crossing.
ATWS-0610	73.1	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0611	73.1	Northampton	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for road crossing.
ATWS-0612	73.2	Northampton	0.3	0.2	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction.
ATWS-0613	73.3	Northampton	0.4	0.0	0.0	0.2	0.0	0.0	0.2	ATWS is required for access road and road crossing.
ATWS-0614	73.4	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and road crossing.
ATWS-0615	73.5	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0616	73.6	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0617	73.6	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0618	73.7	Northampton	0.3	0.0	0.0	0.0	0.3	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0619	73.7	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0620	73.8	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0621	73.8	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0622	73.9	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for access road and side bend construction
ATWS-0623	74.0	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for access road and side bend construction
ATWS-0624	74.0	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing.
ATWS-0625	74.0	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing.
ATWS-0626	74.1	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing.
ATWS-0627	74.1	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for foreign pipeline crossing.
ATWS-0628	74.3	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0629	74.3	Northampton	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0630	74.4	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0631	74.4	Northampton	0.9	0.9	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and stream crossing.
ATWS-0632	74.6	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0633	74.7	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0634	74.7	Northampton	0.9	0.7	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, wetland crossing and rugged topography / sloped construction.
ATWS-0635	74.9	Northampton	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and road crossing.
ATWS-0636	74.9	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and road crossing.
ATWS-0637	75.0	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0638	75.0	Northampton	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0639	75.2	Northampton	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction.
ATWS-0640	75.5	Northampton	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and rugged topography / sloped construction.
ATWS-0641	75.5	Northampton	1.2	0.5	0.0	0.4	0.3	0.0	0.0	ATWS is required for topsoil segregation, stream crossing and rugged topography / sloped construction.
ATWS-0642	75.7	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and rugged topography / sloped construction.
ATWS-0644	75.7	Northampton	1.2	0.7	0.0	0.5	0.0	0.0	0.0	ATWS is required for stream crossing, topsoil segregation, road crossing and rugged topography / sloped construction.
ATWS-0643	75.8	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing.
ATWS-0645	75.9	Northampton	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, and road crossing.
ATWS-0646	75.9	Northampton	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0647	75.9	Bucks	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing / residential construction
ATWS-0648	76.0	Bucks	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing / residential construction
ATWS-0649	76.1	Bucks	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0650	76.2	Bucks	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation / road crossing, and stream crossing
ATWS-0651	76.2	Bucks	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction.
ATWS-0652	76.3	Bucks	0.7	0.5	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and rugged topography / sloped construction.
ATWS-0653	76.5	Bucks	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for access road, topsoil segregation, and road crossing.
ATWS-0654	76.5	Bucks	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road, topsoil segregation, and road crossing.
ATWS-0655	76.5	Bucks	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0656	76.6	Bucks	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0657	76.7	Bucks	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0658	76.7	Bucks	3.3	3.2	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0659	77.2	Bucks	1.6	0.8	0.0	0.8	0.0	0.0	0.0	ATWS is required for HDD construction.
ATWS-0660	77.3	Bucks	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, stream crossing, and HDD construction.
Hellertown Lateral										
ATWS-0580	0.0	Northampton	0.8	0.0	0.0	0.2	0.6	0.0	0.0	ATWS is required for road crossing, stream crossing, topsoil segregation, and facility site construction
ATWS-1105	0.0	Northampton	0.4	0.0	0.0	0.3	0.2	0.0	0.0	ATWS is required for launcher/receiver
ATWS-0581	0.3	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0582	0.3	Northampton	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0583	0.6	Northampton	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction
ATWS-0584	0.7	Northampton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for residential construction

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0586	0.7	Northampton	0.3	0.0	0.0	0.0	0.1	0.0	0.2	ATWS is required for residential construction and road crossing
ATWS-0585	0.8	Northampton	2.2	1.0	0.0	1.2	0.0	0.0	0.0	ATWS is required for residential construction, road crossing, topsoil segregation, and rugged topography /sloped construction
ATWS-0587	0.8	Northampton	0.3	0.0	0.0	0.0	0.0	0.0	0.3	ATWS is required for residential construction, road crossing, and topsoil segregation
ATWS-0588	1.2	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0590	1.3	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0593	1.3	Northampton	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0596	1.3	Northampton	0.5	0.4	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0594	1.4	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and rugged topography / sloped construction
ATWS-0595	1.4	Northampton	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0589	1.6	Northampton	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, foreign pipeline crossing, and rugged topography / sloped construction
ATWS-0591	1.7	Northampton	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, foreign pipeline crossing, and rugged topography / sloped construction
ATWS-0592	1.7	Northampton	1.6	0.2	0.0	1.4	0.0	0.0	0.0	ATWS is required for topsoil segregation, foreign pipeline crossing, and rugged topography / sloped construction
ATWS-0597	2.0	Northampton	0.2	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for topsoil segregation, foreign pipeline crossing, and rugged topography / sloped construction
		Pennsylvania Total	**286.4**	**90.5**	**13.5**	**142.5**	**15.7**	**10.9**	**13.3**	
New Jersey Mainline										
ATWS-0661	77.9	Hunterdon	0.9	0.8	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and residential construction.
ATWS-0662	77.9	Hunterdon	0.9	0.2	0.0	0.7	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and residential construction.
ATWS-0663	78.1	Hunterdon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0664	78.3	Hunterdon	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for topsoil segregation, road crossing, and residential construction.
ATWS-0665	78.3	Hunterdon	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for residential construction and road crossing.
ATWS-0666	78.3	Hunterdon	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0667	78.3	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0668	78.7	Hunterdon	0.4	0.0	0.0	0.1	0.3	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-1252	78.9	Hunterdon	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for sloped construction and rugged topography.
ATWS-1253	78.9	Hunterdon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for sloped construction and rugged topography.
ATWS-1254	79.4	Hunterdon	0.2	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing and soil segregation.
ATWS-1255	79.5	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for gas line crossing and power line crossing
ATWS-1175	79.5	Hunterdon	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for gas line crossing, power line crossing, side bend construction, and road crossing.
ATWS-1176	79.7	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1177	79.7	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1256	79.7	Hunterdon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for side bend construction and interconnect site.
ATWS-1183	79.8	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream/wetland crossing.
ATWS-1184	80.0	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream/wetland crossing.
ATWS-1185	80.1	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road, topsoil segregation, and stream/wetland crossing
ATWS-1186	80.1	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-1187	80.2	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-1188	802	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-1189	80.2	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-1190	80.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and driveway crossing.
ATWS-1191	80.4	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1192	80.4	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-1193	80.5	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-1194	80.6	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for soil segregation and stream/wetland crossing.
ATWS-1195	80.7	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for soil segregation and stream/wetland crossing.
ATWS-1196	80.8	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for soil segregation, stream/wetland crossing, and road crossing.
ATWS-1197	80.8	Hunterdon	0.6	0.0	0.0	0.4	0.1	0.0	0.0	ATWS is required for road crossing, power line crossing, side bend construction, and slope construction.
ATWS-1198	80.8	Hunterdon	0.4	0.0	0.0	0.3	0.1	0.0	0.0	ATWS is required for road crossing, power line crossing, side bend construction, and slope construction.
ATWS-1199	81.1	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for slope construction.
ATWS-1200	81.1	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for slope construction.
ATWS-1201	81.1	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for slope construction.
ATWS-1202	81.2	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for slope construction.
ATWS-1203	81.5	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for stream crossing and slope construction.
ATWS-1204	81.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and slope construction.
ATWS-1205	81.5	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for stream crossing and slope construction.
ATWS-1206	81.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and slope construction.
ATWS-1207	81.6	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-1208	81.6	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road and topsoil segregation.
ATWS-1209	81.7	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-1210	81.7	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-1211	81.8	Hunterdon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0709	81.6	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and residential construction.
ATWS-0710	81.6	Hunterdon	0.2	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation, road crossing, and residential construction.
ATWS-0711	81.7	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0712	81.7	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and wetland crossing.
ATWS-0713	81.7	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0714	81.7	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0715	81.9	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0716	81.9	Hunterdon	0.6	0.4	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0717	82.1	Hunterdon	0.4	0.2	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0718	82.0	Hunterdon	1.5	1.1	0.0	0.4	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0719	82.2	Hunterdon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction and road crossing.
ATWS-0720	82.4	Hunterdon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0721	82.4	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0722	82.4	Hunterdon	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing.
ATWS-0723	82.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and access road.
ATWS-0724	82.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing.
ATWS-0725	82.5	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0726	82.7	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0727	82.8	Hunterdon	0.9	0.5	0.0	0.0	0.4	0.0	0.0	ATWS is required for wetland crossing, stream crossing, rugged topography / sloped construction, road crossing, and topsoil segregation.
ATWS-0728	82.8	Hunterdon	0.3	0.1	0.0	0.0	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction, road crossing, and topsoil segregation.
ATWS-0729	82.9	Hunterdon	0.7	0.6	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, and stream crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0730	83.1	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing.
ATWS-0731	83.2	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0732	83.2	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing.
ATWS-0733	83.2	Hunterdon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for road crossing and rugged topography / sloped construction.
ATWS-0734	83.2	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and rugged topography / sloped construction.
ATWS-0735	83.4	Hunterdon	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction.
ATWS-0736	83.7	Hunterdon	0.6	0.4	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and wetland crossing.
ATWS-0737	83.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing.
ATWS-0738	83.9	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and wetland crossing.
ATWS-0739	84.0	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing and road crossing.
ATWS-0740	84.0	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing.
ATWS-0741	84.2	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-0742	84.2	Hunterdon	0.7	0.6	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0743	84.4	Hunterdon	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and rugged topography / sloped construction.
ATWS-0744	84.4	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and rugged topography / sloped construction.
ATWS-0745	84.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and rugged topography / sloped construction.
ATWS-0746	84.6	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and topsoil segregation.
ATWS-1212	84.5	Hunterdon	0.7	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, stream crossing, and driveway crossing.
ATWS-1213	84.7	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, stream crossing, and driveway crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1214	84.8	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-1215	84.8	Hunterdon	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-1216	85.1	Hunterdon	0.3	0.1	0.0	0.1	0.0	0.0	0.1	ATWS is required for topsoil segregation.
ATWS-1217	85.2	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-1218	85.3	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for wetland and stream crossing.
ATWS-1219	85.4	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1220	85.4	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1257	85.5	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-1221	85.6	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland and stream crossing.
ATWS-1222	85.6	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland and stream crossing.
ATWS-1223	85.6	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland and stream crossing.
ATWS-1224	85.6	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland and stream crossing.
ATWS-1225	85.7	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing.
ATWS-1226	85.7	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation.
ATWS-1227	85.8	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation.
ATWS-1228	85.8	Hunterdon	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation.
ATWS-1229	86.0	Hunterdon	1.2	1.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland, and stream crossing.
ATWS-1230	86.2	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland, and stream crossing.
ATWS-1231	86.3	Hunterdon	0.5	0.0	0.0	0.0	0.5	0.0	0.0	ATWS is required for soil segregation, wetland and stream crossing, and road crossing.
ATWS-1232	86.3	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for soil segregation, wetland and stream crossing, and road crossing.
ATWS-1233	86.4	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0767	86.4	Hunterdon	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, residential construction, road crossing, wetland crossing, and stream crossing.
ATWS-0768	85.8	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0769	85.9	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0770	86.0	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0771	86.0	Hunterdon	0.9	0.9	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-0772	86.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road and topsoil segregation.
ATWS-0773	86.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road and topsoil segregation.
ATWS-0774	86.3	Hunterdon	1.1	1.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing.
ATWS-1258	86.7	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for soil segregation, wetland and stream crossing, and slope construction.
ATWS-1259	86.7	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road, wetland and stream crossing, and slope construction.
ATWS-1260	86.8	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for access road.
ATWS-1261	87.0	Hunterdon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0780	87.0	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0783	87.4	Hunterdon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for road crossing.
ATWS-0784	87.4	Hunterdon	0.2	0.0	0.1	0.0	0.1	0.0	0.0	ATWS is required for road crossing.
ATWS-0785	87.4	Hunterdon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for road crossing, wetland crossing, and topsoil segregation.
ATWS-0786	87.4	Hunterdon	0.3	0.0	0.0	0.0	0.3	0.0	0.0	ATWS is required for road crossing, wetland crossing, topsoil segregation, and residential construction
ATWS-0787	87.7	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, and wetland crossing
ATWS-0788	87.7	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, and wetland crossing
ATWS-0789	87.7	Hunterdon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, and wetland crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0790	87.7	Hunterdon	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, wetland crossing, and rugged topography / sloped construction
ATWS-0791	87.9	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and topsoil segregation
ATWS-0792	87.9	Hunterdon	0.5	0.4	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and topsoil segregation
ATWS-0793	88.1	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0794	88.2	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0795	88.2	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0796	88.2	Hunterdon	0.6	0.5	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, wetland crossing, and stream crossing
ATWS-0797	88.3	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and stream crossing
ATWS-0799	88.4	Hunterdon	1.4	1.2	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing, and rugged topography / sloped construction
ATWS-0798	88.5	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and rugged topography / sloped construction
ATWS-0800	88.7	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, and stream crossing
ATWS-0801	88.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, and rugged topography / sloped construction
ATWS-0802	88.8	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing, and rugged topography / sloped construction
ATWS-0803	88.8	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, and rugged topography / sloped construction
ATWS-0804	88.8	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, and rugged topography / sloped construction
ATWS-0805	88.9	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0806	88.9	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0807	89.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing
ATWS-0808	89.5	Hunterdon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for road crossing, wetland crossing, stream crossing, and rugged topography / sloped construction
ATWS-0809	89.6	Hunterdon	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream and wetland crossing, topsoil segregation, and rugged topography.
ATWS-0810	89.6	Hunterdon	1.7	1.4	0.0	0.3	0.0	0.0	0.0	ATWS is required for stream and wetland crossing and topsoil segregation.
ATWS-1262	89.9	Hunterdon	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream and wetland crossing, and rugged topography.
ATWS-1263	90.1	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream and wetland crossing, and rugged topography.
ATWS-1264	90.1	Hunterdon	1.1	0.8	0.3	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-1265	90.5	Hunterdon	0.2	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for road crossing.
ATWS-1266	90.5	Hunterdon	0.2	0.0	0.2	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-1267	90.5	Hunterdon	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0819	90.8	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing residential construction and topsoil segregation
ATWS-0820	90.8	Hunterdon	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing residential construction and topsoil segregation
ATWS-0821	90.8	Hunterdon	0.3	0.0	0.0	0.0	0.0	0.0	0.2	ATWS is required for wetland crossing residential construction and topsoil segregation
ATWS-0822	90.8	Hunterdon	0.3	0.0	0.0	0.0	0.0	0.0	0.3	ATWS is required for wetland crossing residential construction and topsoil segregation
ATWS-0824	90.9	Hunterdon	3.6	3.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing, and HDD construction.
ATWS-1234	91.4	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for HDD construction.
ATWS-1235	92.6	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for HDD construction.
ATWS-1236	92.6	Hunterdon	0.7	0.6	0.0	0.1	0.0	0.0	0.0	ATWS is required for HDD construction and topsoil segregation.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1237	92.8	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-1238	92.8	Hunterdon	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing.
ATWS-0847	93.1	Hunterdon	0.3	0.2	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, stream crossing, and wetland crossing
ATWS-0848	93.1	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, stream crossing, and wetland crossing
ATWS-0849	93.4	Hunterdon	0.6	0.0	0.0	0.5	0.1	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-0850	93.7	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation, wetland crossing and residential construction
ATWS-0851	93.7	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation and wetland crossing
ATWS-0852	93.8	Hunterdon	0.5	0.0	0.0	0.3	0.2	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing
ATWS-0853	93.9	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing
ATWS-0854	94.3	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-0855	94.3	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing
ATWS-0856	94.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing
ATWS-0857	94.4	Hunterdon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0858	94.5	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing and stream crossing
ATWS-0859	94.6	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0860	94.6	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0861	94.7	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0862	94.7	Hunterdon	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0863	94.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.1	ATWS is required for road crossing
ATWS-0864	94.8	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-0865	94.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-0866	94.9	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0867	94.9	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-0868	95.0	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-0869	95.1	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing, stream crossing and topsoil segregation
ATWS-0870	95.1	Hunterdon	1.5	0.0	0.0	0.4	1.1	0.0	0.0	ATWS is required for wetland crossing, stream crossing and topsoil segregation
ATWS-0871	95.2	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for waterbody crossing
ATWS-0872	95.2	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for waterbody crossing
ATWS-0873	95.3	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for waterbody crossing
ATWS-0874	95.3	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for waterbody crossing
ATWS-0875	95.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0876	95.4	Hunterdon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0877	95.4	Hunterdon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0878	95.5	Hunterdon	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0879	95.5	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0880	95.6	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0881	95.9	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0882	96.0	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0883	96.1	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0884	96.1	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0885	96.2	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and stream crossing
ATWS-0886	96.3	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation
ATWS-0887	96.3	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation
ATWS-0888	96.3	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing, topsoil segregation, and road crossing
ATWS-0889	96.3	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing, topsoil segregation, and road crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0890	96.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for access road and road crossing
ATWS-0891	96.7	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for stream crossing
ATWS-0892	96.7	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0893	96.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0894	96.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0895	96.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0896	96.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0897	96.8	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation and stream crossing
ATWS-0898	96.8	Hunterdon	0.7	0.4	0.0	0.0	0.0	0.0	0.3	ATWS is required for road crossing, topsoil segregation, residential construction, and stream crossing
ATWS-0899	97.1	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0900	97.2	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing
ATWS-0901	97.3	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing
ATWS-0902	97.3	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-0903	97.4	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing, wetland crossing and road crossing
ATWS-0904	97.4	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for side bend construction, topsoil segregation and wetland crossing
ATWS-0905	97.5	Hunterdon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0906	97.6	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0907	97.6	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0908	97.6	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0909	97.6	Hunterdon	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for Utility crossing, forested construction and residential construction
ATWS-0910	97.6	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for Utility crossing, Forested construction and residential construction

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0911	97.7	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for Utility crossing, Forested construction, topsoil segregation and residential construction
ATWS-0912	97.8	Hunterdon	0.5	0.1	0.0	0.4	0.0	0.0	0.0	ATWS is required for Utility crossing, Forested construction, topsoil segregation and residential construction
ATWS-0913	97.8	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and residential construction
ATWS-0914	97.8	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0915	97.9	Hunterdon	0.2	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-0916	97.9	Hunterdon	1.7	1.5	0.0	0.0	0.0	0.0	0.2	ATWS is required for road crossing and topsoil segregation
ATWS-0917	98.4	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-0918	98.4	Hunterdon	0.2	0.0	0.0	0.1	0.0	0.0	0.1	ATWS is required for stream crossing
ATWS-0919	98.5	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0920	98.5	Hunterdon	0.2	0.1	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0921	98.5	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0922	98.5	Hunterdon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for road crossing
ATWS-0924	98.6	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing
ATWS-0982	98.6	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0925	98.7	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for wetland crossing
ATWS-0926	98.8	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing and topsoil segregation
ATWS-1267.01	99.3	Hunterdon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1268	99.4	Hunterdon	0.8	0.6	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-1269	99.6	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and soil segregation.
ATWS-1270	99.6	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and soil segregation.
ATWS-1271	99.7	Hunterdon	1.8	1.8	0.0	0.0	0.0	0.0	0.0	ATWS is required for HDD construction and topsoil segregation.
ATWS-1272	99.7	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for HDD construction and topsoil segregation.

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0969	101.0	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0970	101.0	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0971	101.0	Hunterdon	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation
ATWS-0972	101.0	Hunterdon	0.8	0.7	0.0	0.0	0.0	0.0	0.1	ATWS is required for topsoil segregation
ATWS-0973	101.2	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-0974	101.2	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and stream crossing
ATWS-0975	101.2	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, road crossing, and stream crossing
ATWS-1276	101.3	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and soil segregation.
ATWS-1277	101.3	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and soil segregation.
ATWS-1278	101.4	Hunterdon	1.5	1.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation.
ATWS-0982.01	101.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0983	101.9	Hunterdon	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-0984	101.9	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction
ATWS-0985	101.9	Hunterdon	0.8	0.3	0.0	0.5	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, road crossing and stream crossing
ATWS-0986	102.1	Hunterdon	0.3	0.3	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, road crossing and stream crossing
ATWS-0987	102.1	Hunterdon	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, and road crossing
ATWS-0988	102.1	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, and road crossing
ATWS-0989	102.1	Hunterdon	1.7	1.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, rugged topography / sloped construction, and road crossing
ATWS-0990	102.2	Hunterdon	1.2	1.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and rugged topography / sloped construction
ATWS-0991	102.5	Hunterdon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for Utility crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-0992	102.5	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for Utility crossing
ATWS-0993	102.6	Hunterdon	0.6	0.0	0.0	0.5	0.1	0.0	0.0	ATWS is required for Utility crossing
ATWS-0994	102.5	Hunterdon	0.3	0.0	0.0	0.1	0.2	0.0	0.0	ATWS is required for Utility crossing
ATWS-0995	102.7	Hunterdon	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing
ATWS-0996	102.8	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing
ATWS-1279	102.7	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-0997	102.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0998	102.8	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing and road crossing
ATWS-0999	102.9	Hunterdon	0.4	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for stream crossing, road crossing, residential construction, and wetland crossing
ATWS-1280	102.9	Hunterdon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for road crossing, stream and wetland crossing
ATWS-1281	102.9	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1000	103.1	Hunterdon	0.5	0.0	0.0	0.4	0.1	0.0	0.0	ATWS is required for stream crossing, road crossing, and wetland crossing
ATWS-1001	103.1	Hunterdon	0.2	0.0	0.0	0.0	0.2	0.0	0.0	ATWS is required for wetland crossing and Utility crossing
ATWS-1002	103.4	Hunterdon	0.8	0.0	0.0	0.8	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction
ATWS-1003	103.6	Hunterdon	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1004	103.6	Hunterdon	0.2	0.0	0.0	0.1	0.0	0.0	0.1	ATWS is required for road crossing
ATWS-1005	103.6	Hunterdon	0.2	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing and residential construction
ATWS-1006	103.6	Hunterdon	0.4	0.0	0.0	0.0	0.4	0.0	0.0	ATWS is required for road crossing
ATWS-1007	103.7	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and rugged topography / sloped construction
ATWS-1008	103.7	Hunterdon	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing and rugged topography / sloped construction
ATWS-1009	103.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and rugged topography / sloped construction
ATWS-1010	103.8	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and rugged topography / sloped construction

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1011	103.8	Hunterdon	1.2	0.0	0.0	1.1	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing
ATWS-1012	104.0	Hunterdon	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction and road crossing
ATWS-1014	104.1	Hunterdon	1.0	0.7	0.0	0.3	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-1282	104.1	Hunterdon	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-1016	104.3	Mercer	1.5	1.3	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing, Utility crossing and topsoil segregation
ATWS-1015	104.4	Mercer	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for Utility crossing and access road turnaround
ATWS-1017	104.5	Mercer	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for Utility crossing and side bend construction
ATWS-1019	104.6	Mercer	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1283	104.6	Mercer	0.8	0.0	0.0	0.8	0.0	0.0	0.0	ATWS is required for road crossing and stream crossing
ATWS-1021	104.7	Mercer	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-1022	104.8	Mercer	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for stream crossing and topsoil segregation
ATWS-1025	104.8	Mercer	0.4	0.0	0.0	0.0	0.0	0.0	0.4	ATWS is required for road crossing and topsoil segregation
ATWS-1284	104.8	Mercer	0.3	0.1	0.0	0.2	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-1026	104.9	Mercer	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction, road crossing, topsoil segregation, and Utility crossing
ATWS-1027	104.9	Mercer	2.3	2.1	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, Utility crossing, rugged topography / sloped construction, wetland crossing, and stream crossing
ATWS-1285	105.2	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing
ATWS-1286	105.3	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing, stream crossing and soil segregation
ATWS-1287	105.3	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and soil segregation
ATWS-1288	105.3	Mercer	0.1	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-1029	105.4	Mercer	0.6	0.6	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1030	105.4	Mercer	0.9	0.8	0.0	0.1	0.0	0.0	0.0	ATWS is required for topsoil segregation and wetland crossing and HDD construction
ATWS-1031	106.0	Mercer	0.6	0.0	0.0	0.6	0.0	0.0	0.0	ATWS is required for HDD construction
ATWS-1289	106.0	Mercer	1.0	0.0	0.0	1.0	0.0	0.0	0.0	ATWS is required for HDD construction
ATWS-1290	106.2	Mercer	0.7	0.0	0.0	0.0	0.7	0.0	0.0	ATWS is required for topsoil segregation
ATWS-1291	106.5	Mercer	1.2	0.0	0.0	1.2	0.0	0.0	0.0	ATWS is required for sloped construction
ATWS-1033	10.8	Mercer	2.3	0.0	0.0	2.3	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction
ATWS-1034	10.2	Mercer	0.2	0.0	0.1	0.0	0.1	0.0	0.0	ATWS is required for access road
ATWS-1035	107.4	Mercer	0.2	0.0	0.0	0.2	0.1	0.0	0.0	ATWS is required for Utility crossing and side bend construction
ATWS-1036	107.4	Mercer	0.6	0.0	0.0	0.5	0.1	0.0	0.0	ATWS is required for Utility crossing, side bend construction and rugged topography / sloped construction
ATWS-1038	107.5	Mercer	1.1	0.0	0.0	1.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and side bend construction
ATWS-1292	107.7	Mercer	0.8	0.0	0.0	0.8	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction
ATWS-1043	107.8	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction
ATWS-1044	107.8	Mercer	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing
ATWS-1293	107.8	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for stream crossing and rugged topography / sloped construction
ATWS-1045	108.0	Mercer	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing
ATWS-1294	108.0	Mercer	0.5	0.0	0.0	0.3	0.2	0.0	0.0	ATWS is required for power line crossing, side bend construction, and wetland crossing
ATWS-1295	108.1	Mercer	0.6	0.0	0.0	0.5	0.1	0.0	0.0	ATWS is required for power line crossing, side bend construction, and wetland crossing
ATWS-1296	108.3	Mercer	0.3	0.0	0.0	0.3	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-1048	108.4	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing and road crossing
ATWS-1297	108.3	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1298	108.4	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing and road crossing
ATWS-1049	108.4	Mercer	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-1050	108.4	Mercer	0.7	0.7	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing, road crossing and topsoil segregation
ATWS-1051	108.6	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-1052	108.7	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-1053	108.8	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and topsoil segregation
ATWS-1054	108.8	Mercer	1.1	1.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and topsoil segregation
ATWS-1055	109.1	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-1056	109.1	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-1057	109.1	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing and topsoil segregation
ATWS-1299	109.1	Mercer	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for wetland and stream crossing and topsoil segregation.
ATWS-1300	109.3	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-1301	109.4	Mercer	0.2	0.0	0.0	0.1	0.1	0.0	0.0	ATWS is required for access roads and topsoil segregation
ATWS-1302	109.5	Mercer	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for stream crossing and topsoil segregation
ATWS-1060	109.5	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing and stream crossing
ATWS-1061	109.5	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, wetland crossing and stream crossing
ATWS-1303	109.5	Mercer	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation, stream crossing, and road crossing
ATWS-1064	109.7	Mercer	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and road crossing
ATWS-1065	109.7	Mercer	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1304	109.7	Mercer	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing and topsoil segregation
ATWS-1305	109.7	Mercer	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-1067	110.1	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1068	110.1	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-1069	110.2	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing and stream crossing
ATWS-1306	110.2	Mercer	1.8	0.0	0.0	1.8	0.0	0.0	0.0	ATWS is required for wetland crossing, stream crossing, and rugged topography / slope construction
ATWS-1071	110.3	Mercer	0.7	0.0	0.0	0.6	0.1	0.0	0.0	ATWS is required for HDD construction
ATWS-1307	110.9	Mercer	1.3	0.0	0.0	1.3	0.0	0.0	0.0	ATWS is required for access road, road crossing, and topsoil segregation
ATWS-1308	110.9	Mercer	0.5	0.3	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-1309	111.0	Mercer	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1310	111.0	Mercer	0.2	0.2	0.0	0.0	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1311	111.0	Mercer	3.4	3.1	0.0	0.3	0.0	0.0	0.0	ATWS is required for HDD construction
ATWS-1312	111.0	Mercer	1.7	1.6	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, topsoil segregation, and HDD crossing
ATWS-1313	111.9	Mercer	0.5	0.4	0.0	0.0	0.0	0.0	0.1	ATWS is required for HDD construction and topsoil segregation
ATWS-1314	111.9	Mercer	0.3	0.0	0.0	0.0	0.0	0.0	0.3	ATWS is required for HDD construction and topsoil segregation
ATWS-1315	112.0	Mercer	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road construction and topsoil segregation
ATWS-1316	112.0	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for road construction and topsoil segregation
ATWS-1317	112.0	Mercer	0.1	0.0	0.1	0.0	0.0	0.0	0.0	ATWS is required for road construction and topsoil segregation
ATWS-1318	112.0	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-1319	112.1	Mercer	0.1	0.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
ATWS-1320	112.1	Mercer	0.4	0.4	0.0	0.0	0.0	0.0	0.0	ATWS is required for gas line crossing and topsoil segregation
ATWS-1321	112.2	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for gas line crossing and topsoil segregation
ATWS-1322	112.2	Mercer	0.8	0.6	0.0	0.2	0.0	0.0	0.0	ATWS is required for gas line crossing, side bend construction, and topsoil segregation
ATWS-1323	112.5	Mercer	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for wetland crossing
ATWS-1324	112.6	Mercer	0.5	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for road crossing
ATWS-1325	112.7	Mercer	0.7	0.0	0.0	0.7	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1243	113.0	Mercer	0.5	0.5	0.0	0.1	0.0	0.0	0.0	ATWS is required for road crossing, wetland crossing, and stream crossing
ATWS-1244	113.1	Mercer	0.6	0.0	0.0	0.5	0.0	0.0	0.1	ATWS is required for road crossing and gas line crossing
ATWS-1245	113.2	Mercer	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for gas line crossing and topsoil segregation
ATWS-1246	113.2	Mercer	0.4	0.0	0.0	0.4	0.0	0.0	0.0	ATWS is required for gas line crossing and topsoil segregation
ATWS-1247	113.3	Mercer	0.5	0.0	0.0	0.5	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction.
ATWS-1248	113.3	Mercer	0.5	0.2	0.0	0.2	0.0	0.0	0.0	ATWS is required for topsoil segregation and bore
ATWS-1326	113.4	Mercer	0.2	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for bore
ATWS-1327	113.5	Mercer	0.2	0.0	0.0	0.2	0.0	0.0	0.0	ATWS is required for bore
ATWS-1328	113.5	Mercer	1.1	1.1	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation and wareyard
ATWS-1099	114.0	Mercer	0.2	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing
ATWS-1100	114.0	Mercer	0.1	0.0	0.0	0.0	0.0	0.0	0.1	ATWS is required for road crossing and residential construction
ATWS-1106	114.0	Mercer	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for access to Transco Receiver Site
ATWS-1107	114.0	Mercer	0.5	0.0	0.0	0.0	0.5	0.0	0.0	ATWS is required for access to Transco Receiver Site
Lambertville Lateral										
ATWS-1275	0.0	Hunterdon	0.2	0.0	0.0	0.1	0.2	0.0	0.0	ATWS is required for lateral connection
ATWS-1274	0.0	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for lateral connection
ATWS-1273	0.1	Hunterdon	0.8	0.0	0.0	0.8	0.0	0.0	0.0	ATWS is required for topsoil segregation and side bend construction
ATWS-0966	0.4	Hunterdon	2.2	0.0	0.0	2.2	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing
ATWS-0965	0.4	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and stream crossing
ATWS-0967	0.9	Hunterdon	1.6	1.5	0.0	0.1	0.0	0.0	0.0	ATWS is required for rugged topography / sloped construction and topsoil segregation
ATWS-0968	1.3	Hunterdon	0.5	0.5	0.0	0.0	0.0	0.0	0.0	ATWS is required for topsoil segregation
Gilbert Lateral										
ATWS-1179	0.1	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for power line crossing

Table G-15

Additional Temporary Work Space and Extra Work/Staging Areas for the Project a/

ATWS Number	MP	County	Total Area (Acres)	Existing Land Use (Acres)						Reason Needed
				Agricultural	Commercial /Industrial	Forest/ Woodland	Open Land	Open Water	Residential	
ATWS-1181	0.1	Hunterdon	0.1	0.0	0.0	0.0	0.1	0.0	0.0	ATWS is required for power line crossing
ATWS-1180	0.0	Hunterdon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ATWS is required for lateral connection
ATWS-1182	0.0	Hunterdon	0.1	0.0	0.0	0.1	0.0	0.0	0.0	ATWS is required for lateral connection
		New Jersey Total	**141.3**	**79.4**	**1.0**	**46.7**	**10.0**	**0.0**	**4.2**	
		Project Total	**427.7**	**169.9**	**14.5**	**189.2**	**25.7**	**10.9**	**17.5**	

a/ All units in acres and rounded to the nearest 0.1. Values of 0.0 represent impacts less than 0.05 acre and are included in the total project impacts. The totals shown in this table may not equal the sum of addends due to rounding.

Agricultural Land - Active cropland, pasture, orchards, vineyards, and/or hay fields;

Forest and Woodland - Tracts of upland or wetland forest or woodland that would be removed for the construction right-of-way or extra work or staging areas;

Open Land - Non-forested lands, herbaceous and scrub-shrub wetlands, and maintained utility right-of-way;

Residential Land - Residential yards, residential subdivisions, and planned new residential developments;

Industrial or Commercial Land – Electric power or gas utility stations, manufacturing or industrial plants, landfills, mines, quarries, commercial or retail facilities, and roads;

Open Water - Water Crossings greater than 100 feet.

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
PennEast Mainline						
Luzerne	Kingston Twp	Shed (N/A)	1.5	N/A	0	0
Luzerne	Kingston Twp	Shed (N/A)	1.6	N/A	4	0
Luzerne	Kingston Twp	Shed (N/A)	1.6	NE	92	21
Luzerne	Kingston Twp	Building (Residential)	1.6	NE	112	35
Luzerne	Kingston Twp	Building (Residential)	1.6	SW	69	22
Luzerne	Kingston Twp	Shed (N/A)	1.7	SW	96	36
Luzerne	Kingston Twp	Shed (N/A)	3.0	SW	60	5
Luzerne	Kingston Twp	Building (Residential)	3.1	NE	72	0
Luzerne	Kingston Twp	Building (Residential)	3.1	NE	49	4
Luzerne	Kingston Twp	Building (Residential)	3.2	NE	59	14
Luzerne	West Wyoming Boro	Building (Residential)	4.2	NE	108	14
Luzerne	West Wyoming Boro	Openair (N/A)	4.5	NE	1,122	7
Luzerne	West Wyoming Boro	Building (Residential)	5.4	SW	91	6
Luzerne	West Wyoming Boro	Shed (N/A)	5.4	N/A	63	0
Luzerne	West Wyoming Boro	Building (Non-Residential)	5.4	SE	94	7
Luzerne	West Wyoming Boro	Building (Non-Residential)	5.5	NE	136	21
Luzerne	West Wyoming Boro	Building (Non-Residential)	5.5	NE	147	38
Luzerne	West Wyoming Boro	Building (Non-Residential)	5.5	NE	144	41
Luzerne	West Wyoming Boro	Openair (N/A)	5.5	N/A	45	0
Luzerne	West Wyoming Boro	Building (Residential)	6.0	NE	112	47
Luzerne	Wyoming Boro	Building (Residential)	6.4	SW	155	3
Luzerne	Wyoming Boro	Building (Residential)	6.4	NE	132	17
Luzerne	Wyoming Boro	Building (Residential)	6.4	SW	164	6
Luzerne	Wyoming Boro	Openair (N/A)	6.5	N/A	57	0
Luzerne	Jenkins Twp	Openair (N/A)	7.3	NW	726	10

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Luzerne	Jenkins Twp	Shed (N/A)	7.8	SE	106	34
Luzerne	Jenkins Twp	Building (Residential)	7.8	SE	73	6
Luzerne	Jenkins Twp	Openair (N/A)	7.9	NE	60	11
Luzerne	Jenkins Twp	Openair (N/A)	7.9	SE	82	19
Luzerne	Jenkins Twp	Openair (N/A)	7.9	SE	104	39
Luzerne	Jenkins Twp	Openair (N/A)	7.9	SE	76	11
Luzerne	Jenkins Twp	Building (Residential)	8.0	NW	76	41
Luzerne	Jenkins Twp	Shed (N/A)	8.0	NW	76	41
Luzerne	Jenkins Twp	Shed (N/A)	8.1	N/A	7	0
Luzerne	Plains Twp	Building (Non-Residential)	8.1	SE	136	21
Luzerne	Plains Twp	Building (Residential)	8.1	NW	498	31
Luzerne	Plains Twp	Garage (N/A)	8.1	NW	424	31
Luzerne	Plains Twp	Storage (N/A)	8.1	SW	372	38
Luzerne	Plains Twp	Shed (N/A)	8.1	N/A	88	0
Luzerne	Plains Twp	Shed (N/A)	8.1	NW	156	23
Luzerne	Plains Twp	Storage (N/A)	8.1	NE	473	48
Luzerne	Plains Twp	Storage (N/A)	8.1	NE	493	25
Luzerne	Plains Twp	Building (Residential)	8.1	NW	155	33
Luzerne	Plains Twp	Building (Residential)	8.2	SW	111	32
Luzerne	Plains Twp	Building (Residential)	8.2	SE	40	5
Luzerne	Plains Twp	Garage (N/A)	8.2	NW	42	7
Luzerne	Plains Twp	Building (Residential)	8.2	SE	124	13
Luzerne	Plains Twp	Shed (N/A)	8.2	SE	72	5
Luzerne	Plains Twp	Shed (N/A)	8.3	NE	107	6
Luzerne	Plains Twp	Shed (N/A)	8.3	NE	110	6
Luzerne	Plains Twp	Shed (N/A)	8.3	NE	114	10

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Luzerne	Plains Twp	Shed (N/A)	8.3	NE	120	13
Luzerne	Plains Twp	Building (Non-Residential)	8.3	NW	62	3
Luzerne	Plains Twp	Shed (N/A)	8.3	SW	133	43
Luzerne	Plains Twp	Shed (N/A)	8.3	SW	106	16
Luzerne	Plains Twp	Shed (N/A)	8.4	NE	48	19
Luzerne	Plains Twp	Shed (N/A)	8.4	N/A	60	0
Luzerne	Plains Twp	Shed (N/A)	8.4	NE	57	22
Luzerne	Plains Twp	Shed (N/A)	8.5	NE	71	36
Luzerne	Plains Twp	Shed (N/A)	8.5	NE	68	33
Luzerne	Plains Twp	Building (Residential)	8.5	NW	160	19
Luzerne	Plains Twp	Openair (N/A)	8.5	NW	142	20
Luzerne	Plains Twp	Building (Residential)	8.5	SE	171	17
Luzerne	Plains Twp	Shed (N/A)	8.5	NE	30	5
Luzerne	Plains Twp	Shed (N/A)	8.5	NE	61	26
Luzerne	Plains Twp	Shed (N/A)	8.6	NE	50	15
Luzerne	Plains Twp	Garage (N/A)	8.6	NE	73	38
Luzerne	Plains Twp	Shed (N/A)	8.6	NE	80	45
Luzerne	Plains Twp	Building (Residential)	8.6	NW	177	21
Luzerne	Plains Twp	Shed (N/A)	8.6	NW	146	3
Luzerne	Plains Twp	Building (Residential)	8.8	NW	131	18
Luzerne	Plains Twp	Shed (N/A)	8.9	NE	46	11
Luzerne	Plains Twp	Shed (N/A)	8.9	N/A	34	0
Luzerne	Jenkins Twp	Building (Residential)	9.1	NW	590	46
Luzerne	Jenkins Twp	Building (Residential)	9.1	NE	575	49
Luzerne	Jenkins Twp	Building (Residential)	9.1	NW	399	37
Luzerne	Laflin Boro	Building (Residential)	9.1	NE	1,078	25

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Luzerne	Jenkins Twp	Building (Residential)	9.1	NW	1,168	37
Luzerne	Plains Twp	Shed (N/A)	10.0	NE	65	0
Luzerne	Plains Twp	Shed (N/A)	10.0	N/A	40	0
Luzerne	Jenkins Twp	Building (Non-Residential)	10.5	NW	4,066	38
Luzerne	Plains Twp	Openair (N/A)	11.5	NE	76	11
Luzerne	Bear Creek Twp	Building (Residential)	13.0	NE	550	21
Luzerne	Bear Creek Twp	Building (Non-Residential)	13.0	SW	384	15
Luzerne	Bear Creek Twp	Building (Residential)	13.0	NE	118	13
Luzerne	Bear Creek Twp	Building (Residential)	13.1	NE	129	9
Luzerne	Bear Creek Twp	Shed (N/A)	13.1	SW	86	11
Luzerne	Bear Creek Twp	Garage (N/A)	13.1	SW	119	34
Luzerne	Bear Creek Twp	Openair (N/A)	13.1	NE	217	49
Luzerne	Bear Creek Twp	Garage (N/A)	14.0	NE	7,380	17
Luzerne	Bear Creek Twp	Building (Non-Residential)	14.1	SW	6,960	25
Luzerne	Bear Creek Twp	Other (N/A)	14.4	SE	189	26
Luzerne	Bear Creek Twp	Other (N/A)	14.5	SE	836	31
Luzerne	Bear Creek Twp	Other (N/A)	14.6	SW	1,518	32
Luzerne	Bear Creek Twp	Building (Residential)	17.7	SW	132	47
Luzerne	Bear Creek Twp	Garage (N/A)	17.7	SW	102	17
Luzerne	Bear Creek Twp	Building (Residential)	17.8	SW	135	20
Luzerne	Bear Creek Twp	Openair (N/A)	17.8	SW	152	38
Luzerne	Bear Creek Twp	Openair (N/A)	17.8	SW	123	8
Luzerne	Bear Creek Twp	Shed (N/A)	19.4	NE	112	47
Luzerne	Buck Twp	Building (Residential)	20.3	NW	3,153	28
Carbon	Kidder Twp	Building (Non-Residential)	25.4	NW	2,383	24
Carbon	Kidder Twp	Building (Non-Residential)	26.2	SW	68	8

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Carbon	Kidder Twp	Building (Non-Residential)	26.2	SW	68	8
Carbon	Kidder Twp	Openair (N/A)	31.5	SW	81	46
Carbon	Kidder Twp	Building (Residential)	31.6	NW	57	9
Carbon	Kidder Twp	Building (Residential)	31.6	NE	100	35
Carbon	Kidder Twp	Shed (N/A)	31.7	N/A	12	0
Carbon	Kidder Twp	Shed (N/A)	31.7	N/A	28	0
Carbon	Kidder Twp	Shed (N/A)	31.7	N/A	45	0
Carbon	Kidder Twp	Shed (N/A)	31.7	N/A	0	0
Carbon	Kidder Twp	Shed (N/A)	31.8	N/A	49	0
Carbon	Kidder Twp	Shed (N/A)	31.8	N/A	0	0
Carbon	Kidder Twp	Openair (N/A)	31.8	NE	90	25
Carbon	Kidder Twp	Building (Residential)	31.8	N/A	113	0
Carbon	Kidder Twp	Shed (N/A)	31.8	NE	81	16
Carbon	Kidder Twp	Building (Non-Residential)	31.8	N/A	165	0
Carbon	Kidder Twp	Shed (N/A)	31.8	N/A	0	0
Carbon	Kidder Twp	Shed (N/A)	31.8	N/A	22	0
Carbon	Kidder Twp	Building (Non-Residential)	31.9	NE	557	44
Carbon	Kidder Twp	Shed (N/A)	32.1	SE	1,335	25
Carbon	Penn Forest Twp	Building (Residential)	34.7	SE	29	4
Carbon	Penn Forest Twp	Shed (N/A)	35.1	SE	80	15
Carbon	Penn Forest Twp	Shed (N/A)	35.2	NW	53	18
Carbon	Penn Forest Twp	Building (Residential)	35.3	NW	78	43
Carbon	Penn Forest Twp	Shed (N/A)	35.3	NW	42	7
Carbon	Penn Forest Twp	Openair (N/A)	35.3	NW	43	8
Carbon	Penn Forest Twp	Building (Residential)	35.7	SE	92	40
Carbon	Penn Forest Twp	Garage (N/A)	37.7	NE	115	39

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Carbon	Towamensing Twp	Building (Residential)	42.8	NE	111	7
Carbon	Towamensing Twp	Shed (N/A)	42.9	NE	311	11
Carbon	Towamensing Twp	Garage (N/A)	43.0	NE	279	8
Carbon	Towamensing Twp	Garage (N/A)	44.5	SE	104	39
Carbon	Towamensing Twp	Garage (N/A)	44.6	SW	98	17
Carbon	Towamensing Twp	Building (Non-Residential)	44.8	NW	142	46
Carbon	Towamensing Twp	Shed (N/A)	44.9	NE	156	41
Carbon	Towamensing Twp	Building (Non-Residential)	45.0	NE	120	5
Carbon	Towamensing Twp	Shed (N/A)	45.0	N/A	93	0
Carbon	Towamensing Twp	Building (Non-Residential)	45.0	NE	116	1
Carbon	Towamensing Twp	Shed (N/A)	45.0	N/A	105	0
Carbon	Towamensing Twp	Shed (N/A)	45.1	N/A	40	0
Carbon	Towamensing Twp	Building (Residential)	45.6	NE	135	19
Carbon	Towamensing Twp	Building (Non-Residential)	45.8	NE	44	9
Carbon	Towamensing Twp	Building (Non-Residential)	46.6	SE	254	25
Carbon	Towamensing Twp	Shed (N/A)	46.6	SE	121	4
Carbon	Towamensing Twp	Shed (N/A)	46.6	SW	45	10
Carbon	Lower Towamensing Twp	Shed (N/A)	48.6	N/A	628	0
Carbon	Lower Towamensing Twp	Shed (N/A)	48.9	NE	1,430	10
Carbon	Lower Towamensing Twp	Shed (N/A)	48.9	SW	1,340	17
Carbon	Lower Towamensing Twp	Shed (N/A)	49.4	SE	44	9
Carbon	Lower Towamensing Twp	Building (Non-Residential)	49.4	SE	57	22
Carbon	Lower Towamensing Twp	Openair (N/A)	49.4	SE	44	9
Carbon	Lower Towamensing Twp	Building (Non-Residential)	49.4	SE	58	23
Carbon	Lower Towamensing Twp	Openair (N/A)	49.4	N/A	3	0
Carbon	Lower Towamensing Twp	Openair (N/A)	49.4	SE	57	22

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Carbon	Lower Towamensing Twp	Building (Non-Residential)	49.7	NE	149	34
Carbon	Lower Towamensing Twp	Other (N/A)	49.8	N/A	25	0
Carbon	Lower Towamensing Twp	Storage (N/A)	50.0	NW	25	0
Carbon	Lower Towamensing Twp	Building (Non-Residential)	50.0	NW	60	25
Carbon	Lower Towamensing Twp	Building (Non-Residential)	50.5	NW	107	22
Carbon	Lower Towamensing Twp	Building (Non-Residential)	50.5	SE	57	27
Carbon	Lower Towamensing Twp	Building (Non-Residential)	50.6	SE	80	14
Northampton	Moore Twp	Building (Non-Residential)	54.5	NW	114	43
Northampton	Moore Twp	Shed (N/A)	54.5	N/A	62	0
Northampton	Moore Twp	Shed (N/A)	54.5	NE	65	0
Northampton	Moore Twp	Openair (N/A)	54.5	N/A	35	0
Northampton	Moore Twp	Storage (N/A)	54.6	NW	102	22
Northampton	Moore Twp	Storage (N/A)	54.6	NE	125	35
Northampton	Moore Twp	Shed (N/A)	54.7	NE	123	8
Northampton	Moore Twp	Building (Residential)	54.8	SW	66	8
Northampton	Moore Twp	Building (Residential)	54.8	NE	58	13
Northampton	Moore Twp	Shed (N/A)	54.8	N/A	32	0
Northampton	Moore Twp	Building (Residential)	54.8	SW	129	44
Northampton	Moore Twp	Garage (N/A)	54.9	SW	92	7
Northampton	Moore Twp	Shed (N/A)	54.9	SW	89	6
Northampton	Moore Twp	Building (Residential)	55.3	NE	162	47
Northampton	Moore Twp	Openair (N/A)	55.9	NE	142	27
Northampton	Moore Twp	Shed (N/A)	55.9	SW	144	28
Northampton	Moore Twp	Building (Residential)	57.6	NE	75	10
Northampton	Moore Twp	Building (Residential)	57.6	NE	136	46
Northampton	Moore Twp	Openair (N/A)	57.6	NE	116	26

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Northampton	Moore Twp	Shed (N/A)	57.8	NE	121	6
Northampton	Moore Twp	Building (Residential)	57.8	NE	144	34
Northampton	Moore Twp	Building (Residential)	58.1	NE	131	16
Northampton	Moore Twp	Shed (N/A)	59.2	SW	134	49
Northampton	Moore Twp	Shed (N/A)	59.2	SW	108	23
Northampton	Moore Twp	Openair (N/A)	59.5	SW	51	16
Northampton	Moore Twp	Building (Residential)	60.1	NE	132	17
Northampton	East Allen Twp	Shed (N/A)	60.2	SW	220	14
Northampton	East Allen Twp	Shed (N/A)	60.2	SW	248	17
Northampton	East Allen Twp	Building (Residential)	60.2	NW	353	45
Northampton	Bath Boro	Shed (N/A)	60.5	SW	874	12
Northampton	Bath Boro	Storage (N/A)	60.5	SW	877	45
Northampton	Bath Boro	Storage (N/A)	60.5	SW	873	39
Northampton	Bath Boro	Storage (N/A)	60.5	SW	872	35
Northampton	Bath Boro	Shed (N/A)	60.5	SW	980	44
Northampton	Bath Boro	Storage (N/A)	60.5	SW	871	29
Northampton	Bath Boro	Storage (N/A)	60.5	SW	869	23
Northampton	Bath Boro	Shed (N/A)	60.5	SW	1,367	45
Northampton	Bath Boro	Building (Residential)	60.5	NW	1,179	25
Northampton	Bath Boro	Storage (N/A)	60.5	SW	865	13
Northampton	Bath Boro	Storage (N/A)	60.5	SW	863	5
Northampton	Bath Boro	Storage (N/A)	60.5	NE	918	16
Northampton	Bath Boro	Storage (N/A)	60.5	NE	883	40
Northampton	Bath Boro	Storage (N/A)	60.5	NE	941	19
Northampton	East Allen Twp	Building (Residential)	60.6	NE	159	44
Northampton	East Allen Twp	Shed (N/A)	60.6	N/A	67	0

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Northampton	Upper Nazareth Twp	Shed (N/A)	61.4	NE	159	44
Northampton	Upper Nazareth Twp	Openair (N/A)	61.4	N/A	26	0
Northampton	Upper Nazareth Twp	Openair (N/A)	61.4	N/A	6	0
Northampton	Upper Nazareth Twp	Garage (N/A)	62.0	NE	481	30
Northampton	Upper Nazareth Twp	Shed (N/A)	62.2	SE	45	10
Northampton	Upper Nazareth Twp	Building (Residential)	62.2	NE	41	6
Northampton	Upper Nazareth Twp	Shed (N/A)	62.2	N/A	16	0
Northampton	Upper Nazareth Twp	Building (Non-Residential)	62.3	SW	66	5
Northampton	Upper Nazareth Twp	Garage (N/A)	62.5	SE	200	25
Northampton	Upper Nazareth Twp	Shed (N/A)	62.5	SE	188	25
Northampton	Upper Nazareth Twp	Shed (N/A)	62.5	SE	118	15
Northampton	Upper Nazareth Twp	Shed (N/A)	62.5	SW	1,031	47
Northampton	Upper Nazareth Twp	Building (Non-Residential)	62.5	SW	1,016	36
Northampton	Upper Nazareth Twp	Building (Non-Residential)	62.6	SE	896	31
Northampton	Upper Nazareth Twp	Openair (N/A)	62.7	NW	101	10
Northampton	Upper Nazareth Twp	Shed (N/A)	62.7	NE	124	9
Northampton	Upper Nazareth Twp	Building (Non-Residential)	62.7	NE	138	23
Northampton	Upper Nazareth Twp	Building (Non-Residential)	62.7	NE	28	3
Northampton	Upper Nazareth Twp	Storage (N/A)	62.8	N/A	16	0
Northampton	Upper Nazareth Twp	Building (Non-Residential)	62.8	NW	147	13
Northampton	Upper Nazareth Twp	Shed (N/A)	62.8	N/A	127	0
Northampton	Upper Nazareth Twp	Shed (N/A)	63.5	SE	676	46
Northampton	Upper Nazareth Twp	Building (Residential)	63.7	NE	123	8
Northampton	Upper Nazareth Twp	Building (Residential)	63.7	SW	92	7
Northampton	Upper Nazareth Twp	Shed (N/A)	63.7	N/A	14	0
Northampton	Upper Nazareth Twp	Shed (N/A)	63.7	NE	160	46

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Northampton	Upper Nazareth Twp	Shed (N/A)	63.9	N/A	97	0
Northampton	Upper Nazareth Twp	Building (Residential)	63.9	NE	128	13
Northampton	Upper Nazareth Twp	Building (Residential)	64.0	NE	619	37
Northampton	Lower Nazareth Twp	Shed (N/A)	64.0	SE	118	11
Northampton	Lower Nazareth Twp	Shed (N/A)	64.0	NE	93	28
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	SW	488	41
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NW	503	26
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NW	571	36
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NW	765	31
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NW	642	40
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NW	703	37
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NE	344	31
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	SE	599	25
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	NE	375	37
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	SE	721	32
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	SE	747	31
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	SE	776	34
Northampton	Lower Nazareth Twp	Building (Residential)	64.2	SE	801	34
Northampton	Lower Nazareth Twp	Shed (N/A)	64.3	NE	135	45
Northampton	Lower Nazareth Twp	Garage (N/A)	64.3	NE	91	6
Northampton	Lower Nazareth Twp	Building (Residential)	64.3	NE	103	13
Northampton	Lower Nazareth Twp	Gathering (N/A)	64.4	N/A	64	0
Northampton	Lower Nazareth Twp	Building (Non-Residential)	65.0	NW	240	26
Northampton	Lower Nazareth Twp	Openair (N/A)	65.1	N/A	53	0
Northampton	Lower Nazareth Twp	Shed (N/A)	65.1	SW	94	9
Northampton	Lower Nazareth Twp	Building (Residential)	65.1	SW	116	49

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Northampton	Lower Nazareth Twp	Building (Residential)	65.1	NE	74	4
Northampton	Bethlehem Twp	Building (Residential)	67.0	SW	1,185	39
Northampton	Lower Nazareth Twp	Shed (N/A)	67.0	NW	1,166	29
Northampton	Lower Nazareth Twp	Building (Residential)	67.0	NW	1,081	10
Northampton	Bethlehem Twp	Building (Residential)	67.0	SE	505	30
Northampton	Bethlehem Twp	Gathering (N/A)	67.9	N/A	146	0
Northampton	Bethlehem Twp	Openair (N/A)	68.7	NE	68	33
Northampton	Bethlehem Twp	Garage (N/A)	68.7	NE	80	45
Northampton	Bethlehem Twp	Shed (N/A)	68.8	NW	68	6
Northampton	Bethlehem Twp	Building (Residential)	68.8	NW	128	38
Northampton	Bethlehem Twp	Shed (N/A)	68.8	N/A	79	0
Northampton	Bethlehem Twp	Shed (N/A)	68.9	SE	114	24
Northampton	Bethlehem Twp	Building (Residential)	68.9	SE	115	45
Northampton	Bethlehem Twp	Building (Residential)	68.9	NE	95	15
Northampton	Bethlehem Twp	Shed (N/A)	68.9	SW	71	6
Northampton	Bethlehem Twp	Openair (N/A)	68.9	SW	75	10
Northampton	Bethlehem Twp	Building (Residential)	68.9	NW	80	6
Northampton	Bethlehem Twp	Building (Non-Residential)	68.9	NW	86	14
Northampton	Bethlehem Twp	Building (Non-Residential)	69.0	SE	20	5
Northampton	Bethlehem Twp	Shed (N/A)	69.0	N/A	18	0
Northampton	Bethlehem Twp	Building (Non-Residential)	69.7	NE	59	5
Northampton	Bethlehem Twp	Building (Non-Residential)	69.7	NW	163	32
Northampton	Bethlehem Twp	Building (Non-Residential)	69.9	SE	87	17
Northampton	Bethlehem Twp	Shed (N/A)	70.1	N/A	1,012	0
Northampton	Bethlehem Twp	Building (Non-Residential)	70.4	SE	537	26
Northampton	Lower Saucon Twp	Shed (N/A)	71.9	SW	50	25

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Northampton	Lower Saucon Twp	Building (Residential)	72.0	NE	110	25
Northampton	Lower Saucon Twp	Openair (N/A)	72.0	NE	185	30
Northampton	Lower Saucon Twp	Building (Residential)	72.0	NE	198	43
Northampton	Lower Saucon Twp	Shed (N/A)	72.0	N/A	242	0
Northampton	Lower Saucon Twp	Building (Non-Residential)	72.0	SE	327	7
Northampton	Lower Saucon Twp	Shed (N/A)	72.1	SW	119	39
Northampton	Lower Saucon Twp	Building (Residential)	72.2	NE	553	40
Northampton	Williams Twp	Openair (N/A)	72.9	NE	165	43
Northampton	Williams Twp	Garage (N/A)	73.0	SW	98	38
Northampton	Williams Twp	Shed (N/A)	73.1	SW	117	31
Northampton	Williams Twp	Shed (N/A)	73.3	N/A	58	0
Northampton	Williams Twp	Building (Residential)	73.3	NE	86	21
Northampton	Williams Twp	Shed (N/A)	73.7	NE	82	17
Bucks	Durham Twp	Building (Non-Residential)	76.0	N/A	64	0
Bucks	Durham Twp	Storage (N/A)	76.0	NE	93	28
Bucks	Durham Twp	Storage (N/A)	76.0	NE	81	16
Bucks	Durham Twp	Building (Residential)	76.3	NW	1,642	45
Bucks	Durham Twp	Building (Residential)	76.3	SE	2,050	1
Bucks	Durham Twp	Openair (N/A)	76.3	SE	2,021	10
Bucks	Durham Twp	Shed (N/A)	76.3	SE	1,957	17
Bucks	Durham Twp	Building (Residential)	76.4	NE	2,200	14
Bucks	Durham Twp	Shed (N/A)	77.5	N/A	691	0
Bucks	Durham Twp	Building (Non-Residential)	77.5	SW	765	22
Bucks	Durham Twp	Shed (N/A)	77.5	SW	716	6
Bucks	Durham Twp	Shed (N/A)	77.5	SW	773	41
Bucks	Durham Twp	Shed (N/A)	77.5	N/A	663	0

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Hellertown 24-Inch Lateral		*()*				
Northampton	Lower Saucon Twp	Shed (N/A)	0.1	NW	132	47
Northampton	Lower Saucon Twp	Shed (N/A)	0.1	NW	131	46
Northampton	Lower Saucon Twp	Building (Residential)	0.7	SE	85	5
Northampton	Lower Saucon Twp	Shed (N/A)	0.7	NW	81	21
Northampton	Lower Saucon Twp	Building (Residential)	0.8	NW	63	3
Northampton	Lower Saucon Twp	Building (Residential)	0.8	SE	125	45
Northampton	Lower Saucon Twp	Shed (N/A)	0.8	NW	61	1
Northampton	Lower Saucon Twp	Shed (N/A)	0.8	N/A	23	0
Northampton	Lower Saucon Twp	Shed (N/A)	0.8	SE	110	30
Northampton	Lower Saucon Twp	Shed (N/A)	0.8	SE	52	22
Northampton	Lower Saucon Twp	Shed (N/A)	0.8	SE	51	21
Northampton	Lower Saucon Twp	Shed (N/A)	0.9	SE	53	23
Northampton	Lower Saucon Twp	Shed (N/A)	1.0	SE	78	48
Northampton	Lower Saucon Twp	Shed (N/A)	1.0	SE	71	41
Northampton	Lower Saucon Twp	Storage (N/A)	2.1	SE	64	23
Northampton	Lower Saucon Twp	Shed (N/A)	2.1	N/A	192	0
Northampton	Lower Saucon Twp	Shed (N/A)	2.1	NE	166	34
Northampton	Lower Saucon Twp	Shed (N/A)	2.1	SE	119	16
Northampton	Lower Saucon Twp	Storage (N/A)	2.1	SE	54	9
Northampton	Lower Saucon Twp	Storage (N/A)	2.1	SE	61	9
Northampton	Lower Saucon Twp	Shed (N/A)	2.1	N/A	330	0
Northampton	Lower Saucon Twp	Building (Non-Residential)	2.1	SW	400	27
New Jersey Mainline						
Hunterdon	Holland Twp	Building (Non-Residential)	77.9	SW	200	26
Hunterdon	Holland Twp	Shed (N/A)	77.9	NW	82	3

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Hunterdon	Holland Twp	Shed (N/A)	78.3	SW	44	9
Hunterdon	Holland Twp	Shed (N/A)	78.3	SW	43	8
Hunterdon	Holland Twp	Shed (N/A)	78.3	SW	104	19
Hunterdon	Holland Twp	Building (Residential)	78.3	NE	118	3
Hunterdon	Holland Twp	Shed (N/A)	79.4	NW	157	42
Hunterdon	Holland Twp	Shed (N/A)	79.4	NW	95	30
Hunterdon	Holland Twp	Building (Non-Residential)	79.5	NW	76	11
Hunterdon	Holland Twp	Building (Residential)	80.9	SW	109	49
Hunterdon	Holland Twp	Shed (N/A)	81.8	SE	93	33
Hunterdon	Holland Twp	Building (Non-Residential)	82.1	NE	984	36
Hunterdon	Holland Twp	Building (Non-Residential)	82.2	NW	866	46
Hunterdon	Holland Twp	Garage (N/A)	84.2	SW	84	49
Hunterdon	Holland Twp	Shed (N/A)	84.3	SW	342	17
Hunterdon	Alexandria Twp	Other (N/A)	85.5	SE	88	38
Hunterdon	Alexandria Twp	Building (Residential)	86.4	SE	85	23
Hunterdon	Alexandria Twp	Building (Residential)	85.9	NE	599	4
Hunterdon	Alexandria Twp	Garage (N/A)	86.0	N/A	562	0
Hunterdon	Alexandria Twp	Shed (N/A)	86.0	SW	617	7
Hunterdon	Alexandria Twp	Shed (N/A)	86.0	N/A	572	0
Hunterdon	Alexandria Twp	Shed (N/A)	86.0	SE	653	40
Hunterdon	Alexandria Twp	Shed (N/A)	86.0	N/A	502	0
Hunterdon	Alexandria Twp	Building (Non-Residential)	86.0	N/A	462	0
Hunterdon	Alexandria Twp	Storage (N/A)	86.0	SW	576	3
Hunterdon	Alexandria Twp	Storage (N/A)	86.0	SW	568	14
Hunterdon	Alexandria Twp	Storage (N/A)	86.0	SW	561	24
Hunterdon	Alexandria Twp	Storage (N/A)	86.0	SW	533	15

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Hunterdon	Alexandria Twp	Garage (N/A)	86.3	NW	383	46
Hunterdon	Alexandria Twp	Building (Non-Residential)	86.4	SW	379	35
Hunterdon	Alexandria Twp	Building (Non-Residential)	86.5	SW	2,208	40
Hunterdon	Alexandria Twp	Building (Non-Residential)	86.8	NE	46	1
Hunterdon	Alexandria Twp	Shed (N/A)	86.8	NE	82	37
Hunterdon	Alexandria Twp	Building (Non-Residential)	86.8	NE	91	45
Hunterdon	Alexandria Twp	Shed (N/A)	87.3	NE	69	4
Hunterdon	Alexandria Twp	Shed (N/A)	87.3	N/A	22	0
Hunterdon	Alexandria Twp	Shed (N/A)	87.3	NE	109	44
Hunterdon	Alexandria Twp	Shed (N/A)	87.3	N/A	0	0
Hunterdon	Alexandria Twp	Garage (N/A)	87.3	NE	107	42
Hunterdon	Alexandria Twp	Openair (N/A)	87.5	NE	131	41
Hunterdon	Kingwood Twp	Building (Non-Residential)	89.5	NW	493	45
Hunterdon	Kingwood Twp	Shed (N/A)	90.4	NE	100	15
Hunterdon	Kingwood Twp	Building (Residential)	90.4	SW	124	44
Hunterdon	Kingwood Twp	Shed (N/A)	90.4	N/A	76	0
Hunterdon	Kingwood Twp	Building (Residential)	90.5	SW	102	22
Hunterdon	Kingwood Twp	Shed (N/A)	90.7	NW	60	5
Hunterdon	Kingwood Twp	Building (Non-Residential)	90.8	NW	76	17
Hunterdon	Kingwood Twp	Building (Residential)	90.8	SW	80	19
Hunterdon	Kingwood Twp	Building (Residential)	90.8	NE	94	49
Hunterdon	Kingwood Twp	Openair (N/A)	90.9	NE	67	22
Hunterdon	Kingwood Twp	Shed (N/A)	90.9	SW	60	30
Hunterdon	Kingwood Twp	Shed (N/A)	93.7	NE	107	15
Hunterdon	Kingwood Twp	Shed (N/A)	93.7	NE	52	14
Hunterdon	Kingwood Twp	Shed (N/A)	93.7	NE	74	9

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Hunterdon	Kingwood Twp	Pool (N/A)	93.7	N/A	21	0
Hunterdon	Kingwood Twp	Openair (N/A)	93.7	SW	37	2
Hunterdon	Kingwood Twp	Building (Residential)	93.7	NE	97	32
Hunterdon	Delaware Twp	Shed (N/A)	94.8	N/A	0	0
Hunterdon	Delaware Twp	Building (Residential)	94.8	SE	108	14
Hunterdon	Delaware Twp	Building (Residential)	95.4	NE	63	13
Hunterdon	Delaware Twp	Building (Residential)	95.8	NE	114	49
Hunterdon	Delaware Twp	Shed (N/A)	95.8	NE	96	31
Hunterdon	Delaware Twp	Shed (N/A)	95.8	NE	67	2
Hunterdon	Delaware Twp	Shed (N/A)	96.9	SW	138	48
Hunterdon	Delaware Twp	Shed (N/A)	97.4	N/A	45	0
Hunterdon	Delaware Twp	Shed (N/A)	97.5	NE	71	10
Hunterdon	Delaware Twp	Shed (N/A)	97.5	SE	61	5
Hunterdon	Delaware Twp	Building (Residential)	97.8	NE	141	26
Hunterdon	Delaware Twp	Building (Residential)	97.8	NW	87	17
Hunterdon	Delaware Twp	Storage (N/A)	99.2	NE	83	18
Hunterdon	Delaware Twp	Storage (N/A)	99.2	NE	113	48
Hunterdon	Delaware Twp	Shed (N/A)	99.3	SE	79	43
Hunterdon	Delaware Twp	Building (Residential)	99.3	SW	81	46
Hunterdon	Delaware Twp	Building (Residential)	99.3	N/A	25	0
Hunterdon	West Amwell Twp	Shed (N/A)	100.5	N/A	0	0
Hunterdon	West Amwell Twp	Shed (N/A)	101.1	SW	136	18
Hunterdon	West Amwell Twp	Shed (N/A)	101.1	NE	250	43
Hunterdon	West Amwell Twp	Shed (N/A)	101.2	NE	218	10
Hunterdon	West Amwell Twp	Shed (N/A)	101.2	NE	213	6
Hunterdon	West Amwell Twp	Garage (N/A)	101.2	NE	225	18

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Hunterdon	West Amwell Twp	Openair (N/A)	101.2	NE	213	5
Hunterdon	West Amwell Twp	Building (Residential)	101.2	NE	226	18
Hunterdon	West Amwell Twp	Openair (N/A)	101.2	SW	154	39
Hunterdon	West Amwell Twp	Building (Non-Residential)	101.2	SW	141	26
Hunterdon	West Amwell Twp	Shed (N/A)	101.2	SW	121	6
Hunterdon	West Amwell Twp	Shed (N/A)	101.2	SW	122	15
Hunterdon	West Amwell Twp	Storage (N/A)	101.2	SE	107	14
Hunterdon	West Amwell Twp	Building (Residential)	102.9	SW	116	21
Hunterdon	West Amwell Twp	Shed (N/A)	103.1	NE	80	50
Hunterdon	West Amwell Twp	Building (Residential)	103.6	SW	104	19
Mercer	Hopewell Twp	Shed (N/A)	107.2	N/A	17	0
Mercer	Hopewell Twp	Building (Non-Residential)	109.3	NW	926	27
Mercer	Hopewell Twp	Building (Non-Residential)	109.3	NW	704	3
Mercer	Hopewell Twp	Shed (N/A)	109.3	N/A	913	0
Mercer	Hopewell Twp	Shed (N/A)	109.3	N/A	899	0
Mercer	Hopewell Twp	Building (Non-Residential)	109.3	NE	919	31
Mercer	Hopewell Twp	Building (Non-Residential)	109.3	N/A	551	0
Mercer	Hopewell Twp	Building (Non-Residential)	109.7	N/A	2	0
Mercer	Hopewell Twp	Shed (N/A)	109.8	NW	458	37
Mercer	Hopewell Twp	Shed (N/A)	109.8	NW	535	32
Mercer	Hopewell Twp	Openair (N/A)	110.6	SW	62	37
Mercer	Hopewell Twp	Building (Non-Residential)	110.6	SW	43	18
Mercer	Hopewell Twp	Building (Non-Residential)	110.7	SW	64	39
Mercer	Hopewell Twp	Shed (N/A)	111.9	NE	173	18
Mercer	Hopewell Twp	Building (Residential)	112.0	SW	45	10
Mercer	Hopewell Twp	Shed (N/A)	112.0	SE	144	50

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/
Mercer	Hopewell Twp	Garage (N/A)	112.0	NE	59	9
Mercer	Hopewell Twp	Building (Residential)	112.0	NE	65	11
Mercer	Hopewell Twp	Building (Residential)	112.0	NE	74	9
Mercer	Hopewell Twp	Building (Residential)	112.0	SE	56	11
Mercer	Hopewell Twp	Shed (N/A)	112.1	NE	67	2
Mercer	Hopewell Twp	Shed (N/A)	112.1	N/A	58	0
Mercer	Hopewell Twp	Openair (N/A)	112.1	NE	75	10
Mercer	Hopewell Twp	Shed (N/A)	112.1	NE	124	34
Mercer	Hopewell Twp	Openair (N/A)	112.2	N/A	0	0
Mercer	Hopewell Twp	Shed (N/A)	112.7	N/A	101	0
Mercer	Hopewell Twp	Shed (N/A)	112.8	NW	79	49
Mercer	Hopewell Twp	Building (Residential)	113.1	SE	136	29
Mercer	Hopewell Twp	Shed (N/A)	113.1	SE	131	15
Mercer	Hopewell Twp	Shed (N/A)	113.2	SE	194	29
Mercer	Hopewell Twp	Building (Residential)	113.4	SE	107	22
Mercer	Hopewell Twp	Shed (N/A)	113.5	SE	113	28
Mercer	Hopewell Twp	Shed (N/A)	113.8	NE	193	36
Mercer	Hopewell Twp	Openair (N/A)	113.9	N/A	150	0
Mercer	Hopewell Twp	Building (Residential)	114.0	NW	78	20
Mercer	Hopewell Twp	Gathering (N/A)	114.0	SW	297	16
Gilbert 24-Inch Lateral						
Hunterdon	Holland Twp	Gathering (N/A)	0.0	NE	67	1
Hunterdon	Holland Twp	Storage (N/A)	0.0	NE	213	33
Lambertville 24-Inch Lateral						
Hunterdon	West Amwell Twp	Shed (N/A)	0.2	NW	52	17

Table G-16

Existing Residences and Structures Within 50 Feet of the Construction Workspace

State/Facility/County	Municipality	Description a/	Nearest MP b/	Direction	Distance From Centerline (feet)	Distance From Workspace (feet) c/

a/ N/A- Not Applicable. Residential/Non-Residential are listed for buildings, all other categories (e.g. shed, garage, openair) is not applicable.
b/ Mileposts are estimated due to rounding.
c/ Workspace includes all construction workspace required for the project.

Table G-17

Private Conservation Easements That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Landowner	Managing Agency/ Site Name	Easement Type	Approx. Crossing Length (feet)	Land Affected	
								Cont. (acres)	Oper. (acres)
Pennsylvania Mainline									
Luzerne	Bear Creek Twp	14.5	15.6	Eastern PA Synod of the Lutheran Church	Bucks County	Local Government	5,096	13.8	5.8
Carbon	Penn Forest Twp	36.8	37.2	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	2,210	7.9	2.5
Carbon	Penn Forest Twp	37.2	37.5	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	1,256	3.3	1.4
Carbon	Penn Forest Twp	37.5	38.3	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	4,133	12.2	4.7
Carbon	Penn Forest Twp	38.3	38.5	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	1,077	3.3	1.2
Carbon	Penn Forest Twp	38.5	39.4	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	4,778	12.6	5.5
Carbon	Towamensing Twp	41.4	41.7	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	1,604	4.4	1.8
Carbon	Towamensing Twp	41.7	42.3	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	3,078	9.6	3.5
Carbon	Towamensing Twp	43.9	44.3	Bethlehem Water Auth	The Nature Conservancy	Non-Governmental Organization	2,331	5.3	2.7
Carbon	Towamensing Twp	45.5	45.8	Albertine J Anthony	Carbon County	Local Government	1,430	4.6	1.6
Carbon	Towamensing Twp	45.8	45.8	Albertine J Anthony	Carbon County	Local Government	90	0.4	0.1
Carbon	Towamensing Twp	45.8	45.8	Roger L & Renee L Hahn	Carbon County	Local Government	16	0.0	0.0
Northampton	Upper Nazareth Twp	63.1	63.1	Henry Jr Yeska	Northampton County	Local Government	0	0.0	0.0
Northampton	Upper Nazareth Twp	63.1	63.4	Henry Jr Yeska	Northampton County	Local Government	1,583	5.2	1.8
Northampton	Upper Nazareth Twp	63.1	63.3	Henry Jr Yeska	Northampton County	Local Government	0	0.4	0.0
Northampton	Upper Nazareth Twp	63.2	63.2	Henry Jr Yeska	Northampton County	Local Government	0	0.0	0.0
Northampton	Upper Nazareth Twp	63.3	63.3	Henry Jr Yeska	Northampton County	Local Government	0	0.0	0.0
Northampton	Lower Nazareth Twp	65.2	65.2	Cornerstone Evangelical Free Church	Northampton County	Local Government	285	1.0	0.3
Northampton	Lower Nazareth Twp	65.3	65.5	Randy C & Kimberly S. & Jeffrey L. & Sharon J. Setzer	Northampton County	Local Government	1,318	4.5	1.5
Bucks	Durham Twp	76.1	76.1	Manfred Marschewski	Bucks County	Local Government	0	0.0	0.0
Bucks	Durham Twp	76.1	76.1	Manfred Marschewski	Bucks County	Local Government	0	0.0	0.0

Table G-17

Private Conservation Easements That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Landowner	Managing Agency/ Site Name	Easement Type	Approx. Crossing Length (feet)	Land Affected	
								Cont. (acres)	Oper. (acres)
Bucks	Durham Twp	76.4	76.4	Manfred Marschewski	Bucks County	Local Government	0	0.0	0.0
Bucks	Riegelsville Boro	76.4	76.4	Leon R Koplin	Bucks County	Local Government	11	0.0	0.0
						Pennsylvania Subtotal	30,297	89	35
Hunterdon	Holland Twp	79.6	79.9	Robert E (Trustee) Phillips	New Jersey State Agriculture Development Committee	State	1,335	3.1	1.3
Hunterdon	Holland Twp	79.9	79.9	Robert E (Trustee) Phillips	New Jersey State Agriculture Development Committee	State	2	0.0	0.0
Hunterdon	Holland Twp	79.9	80.0	Robert E Rev Trust Etals Phillips	New Jersey State Agriculture Development Committee	State	662	2.5	0.8
Hunterdon	Holland Twp	80.0	80.1	Robert Phillips	Unknown	Local Government	764	2.2	0.9
Hunterdon	Holland Twp	82.6	82.6	David W Farmer Revocable Living Trust	Unknown	Local Government	0	0.0	0.0
Hunterdon	Holland Twp	82.6	82.6	David W Farmer Revocable Living Trust	Unknown	Local Government	0	0.0	0.0
Hunterdon	Holland Twp	82.6	83.0	David W Farmer Revocable Living Trust	Unknown	Local Government	1,887	5.1	2.2
Hunterdon	Holland Twp	82.6	82.7	David W Farmer Revocable Living Trust	Unknown	Local Government	0	0.3	0.0
Hunterdon	Holland Twp	84.6	85.2	Edith S Kozak	Unknown	Local Government	3,248	9.9	3.7
Hunterdon	Alexandria Twp	86.2	86.5	Christopher & Elizabeth Kroese	Unknown	Local Government	1,818	6.3	2.1
Hunterdon	Alexandria Twp	86.6	87.0	Ronald W & Johanna M Kappus	Unknown	Local Government	3,769	12.4	4.3
Hunterdon	Alexandria Twp	88.3	88.4	Thomas E & Maryellen Sandor	New Jersey Department of Environmental Protection	State	887	2.5	1.0
Hunterdon	Alexandria Twp	88.4	88.5	Thomas E & Maryellen Sandor	New Jersey Department of Environmental Protection	State	569	1.7	0.7
Hunterdon	Alexandria Twp	88.5	88.5	Thomas E & Maryellen Sandor	New Jersey Department of Environmental Protection	State	21	0.0	0.0
Hunterdon	Kingwood Twp	88.5	88.5	Thomas E & Maryellen Sandor	New Jersey Department of Environmental Protection	State	71	0.1	0.1
Hunterdon	Kingwood Twp	89.8	90.1	Ruth Kjaer	Unknown	Local Government	1,108	2.8	1.3
Hunterdon	Kingwood Twp	90.3	90.3	United Reformed Church	Unknown	Unknown Easement Holder	0	0.0	0.0
Hunterdon	Kingwood Twp	90.7	90.8	Cynthia K Niciecki	Unknown	Local Government	523	1.2	0.6

Table G-17

Private Conservation Easements That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Landowner	Managing Agency/ Site Name	Easement Type	Approx. Crossing Length (feet)	Land Affected	
								Cont. (acres)	Oper. (acres)
Hunterdon	Kingwood Twp	90.8	90.9	Grace William & Beth Ann Pandy	Unknown	Local Government	32	0.1	0.0
Hunterdon	Kingwood Twp	93.4	93.7	Hunterdon Land Trust Alliance Etal	Hunterdon Land Trust Alliance	Non-Governmental Organization	1,162	3.1	1.3
Hunterdon	Kingwood Twp	93.7	93.7	Hunterdon Land Trust	Hunterdon Land Trust Alliance	Non-Governmental Organization	44	0.1	0.1
Hunterdon	Kingwood Twp	93.7	93.7	Hunterdon Land Trust Alliance	Hunterdon Land Trust Alliance	Non-Governmental Organization	252	0.6	0.3
Hunterdon	Kingwood Twp	93.7	93.7	Hunterdon Land Trust Alliance Etal	Hunterdon Land Trust Alliance	Non-Governmental Organization	99	0.3	0.1
Hunterdon	Kingwood Twp	93.7	93.8	Hunterdon Land Trust Alliance	New Jersey Audubon Society	Non-Governmental Organization	208	0.9	0.2
Hunterdon	Kingwood Twp	93.7	93.8	Hunterdon Land Trust Alliance Etal	Hunterdon Land Trust Alliance	Non-Governmental Organization	0	0.1	0.0
Hunterdon	Kingwood Twp	95.1	95.1	Thomas W. & Betty S. Kenny	Unknown	Local Government	18	0.0	0.0
Hunterdon	Kingwood Twp	95.1	95.1	Fred J & Debra S Nanni	Unknown	Local Government	265	0.8	0.3
Hunterdon	Delaware Twp	95.1	95.4	Frederick J & Debra Sue Nanni	Unknown	Local Government	1,680	4.9	1.9
Hunterdon	Delaware Twp	95.6	95.7	William Embley	Unknown	Local Government	426	1.1	0.5
Hunterdon	Delaware Twp	95.7	95.9	Dan H & Carla Kelly-mackey Mackey	Unknown	Local Government	1,001	3.9	1.1
Hunterdon	Delaware Twp	95.9	96.2	Dan H & Carla Kelly-mackey Mackey	Unknown	Local Government	1,258	3.8	1.4
Hunterdon	Delaware Twp	96.2	96.6	Dan H & Carla Kelly Mackey	Unknown	Local Government	1,968	4.5	2.3
Hunterdon	Delaware Twp	96.6	96.8	Michael & Maryanne Plesher	Unknown	Local Government	1,429	4.0	1.6
Hunterdon	Delaware Twp	96.8	97.1	Charles W & Sandra Fisher	Unknown	Local Government	1,586	5.0	1.8
Hunterdon	Delaware Twp	97.1	97.4	Richard & Anthony & Beverly Danese	New Jersey Conservation Foundation	Non-Governmental Organization	1,264	2.8	1.5
Hunterdon	Delaware Twp	97.9	98.0	Joseph L & Adele Gugliotta	Unknown	Unknown Easement Holder	0	0.3	0.0
Hunterdon	Delaware Twp	98.1	98.1	Joseph L & Adele Gugliotta	Unknown	Unknown Easement Holder	0	0.0	0.0
Hunterdon	Delaware Twp	99.4	99.9	William A Spolar	New Jersey State Agriculture Development Committee	State	2,284	5.8	2.7
Hunterdon	Delaware Twp	99.8	99.9	Thomas A & Jane L Roosa Kowalczyk	New Jersey State Agriculture Development Committee	State	0	0.1	0.1

Table G-17

Private Conservation Easements That Would be Crossed by the Project Facilities

State/Facility/ County	Municipality	Begin MP	End MP	Landowner	Managing Agency/ Site Name	Easement Type	Approx. Crossing Length (feet)	Land Affected	
								Cont. (acres)	Oper. (acres)
Hunterdon	Delaware Twp	100.9	101.1	Eugene & Mary Ellen Caffrey	New Jersey State Agriculture Development Committee	State	926	1.1	1.1
Hunterdon	Delaware Twp	101.1	101.1	John J & Kathleen A Mcadam	New Jersey State Agriculture Development Committee	State	49	0.1	0.1
Hunterdon	West Amwell Twp	103.1	103.2	Marie Janyszewski	Unknown	Local Government	855	3.4	1.0
Hunterdon	West Amwell Twp	103.6	103.6	Lambertville Water Company	New Jersey Department of Environmental Protection	State	308	0.9	0.4
Mercer	Hopewell Twp	105.7	105.7	L Thomas Jr & Virginia L Welsh	D&R Greenway Land Trust	Non-Governmental Organization	23	0.2	0.0
Mercer	Hopewell Twp	105.7	106.0	L Thomas Jr & Virginia L Welsh	D&R Greenway Land Trust	Non-Governmental Organization	1,542	5.9	1.8
Mercer	Hopewell Twp	106.0	106.0	L Thomas Jr & Virginia L Welsh	D&R Greenway Land Trust	Non-Governmental Organization	335	1.0	0.4
Mercer	Hopewell Twp	108.2	108.5	NJ Dep & County of Mercer	Friends of Hopewell Valley Open Space	Non-Governmental Organization	1,590	5.5	1.8
Mercer	Hopewell Twp	108.6	108.6	NJ Dep & County of Mercer	Friends of Hopewell Valley Open Space	Non-Governmental Organization	0	0.0	0.0
Mercer	Hopewell Twp	108.6	108.6	Thomas Otto & Wendy T Niederer	Friends of Hopewell Valley Open Space	Non-Governmental Organization	0	0.0	0.0
Mercer	Hopewell Twp	109.6	109.6	Patricia Patricelli	New Jersey Conservation Foundation	Non-Governmental Organization	23	0.1	0.0
Mercer	Hopewell Twp	109.7	110.5	Francis E & Judith B Batcha	Friends of Hopewell Valley Open Space	Non-Governmental Organization	3,975	12.3	4.6
						New Jersey Subtotal	7,488	25.0	8.6
						Project Total	41,265	122.8	47.4

Table G-18

Private Recreational and Special Use Areas That Would be Crossed by or Located in Proximity to the Project Facilities

State/Facility/ County	Municipality	Nearest MP	Approx. Distance from Project Facilities	Special Use Area Type	Name of Special Use Area	Land Affected Cont. (acres)	Land Affected Oper. (acres)
Pennsylvania Mainline							
Luzerne	West Wyoming Boro	5.2	0.2 miles	Cemetery	Cemetery (HMMID 13493)	--	--
Luzerne	West Wyoming Boro	5.5	330 feet	Cemetery	Cemetery (HMMID 13512)	--	--
Luzerne	Wyoming Boro	6.1	330 feet	Recreational Facility	Baseball field	--	--
Luzerne	Wyoming Boro	6.5	475 feet	Historical Site	Wyoming Monument	--	--
Luzerne	Wyoming Boro	6.5	0.2 miles	Historical Site	Swetland Homestead	--	--
Luzerne	Wyoming Boro	6.7	0.3 miles	School	Tenth Street Elementary School	--	--
Luzerne	Jenkins Twp	7.5	0.2 miles	Recreational Facility	Baseball field	--	--
Luzerne	Plains Twp	8.2	453 feet	Recreational Facility	Baseball field	--	--
Luzerne	Plains Twp	10.2	0.1 miles	Race Track	Pocono Downs	--	--
Luzerne	Plains Twp	13	0.3 miles	School	Kresgeville School	--	--
Carbon	Kidder Twp	25	1.0 miles	Recreational Facility	Jack Frost Ski Area	--	--
Carbon	Kidder Twp	27.5	0.7 miles	Park	Mosey Wood Pond	--	--
Carbon	Kidder Twp	29	1.0 miles	Park	Lake Harmony	--	--
Carbon	Kidder Twp	29.5	0.5miles	Park	Boulder Field Natural Area in Hickory Run State Park	--	--
Carbon	Kidder Twp	29.8	1.5 miles	Park	Big Boulder Lake	--	--
Carbon	Kidder Twp	30	1.2 miles	Recreational Facility	Big Boulder Ski Area	--	--
Carbon	Kidder Twp	31.9	550 feet	Religious Institution	St. Paul's Lutheran Church	--	--
Carbon	Kidder Twp	32.8	1.1 miles	Park	Mud Swamp Natural Area in Hickory Run State Park	--	--
Carbon	Lower Towamensing	49.4	Project Intersects Property/Area	Recreational Facility	Blue Mountain Ski Area	16.8	12.2
Carbon	Moore Twp	54.1	0.2 miles	Recreational Facility	1132 Delps Road	--	--
Northampton	Borough of Bath	59.3	0.2 miles	School	Mount Vernon School	--	--

Table G-18

Private Recreational and Special Use Areas That Would be Crossed by or Located in Proximity to the Project Facilities

State/Facility/ County	Municipality	Nearest MP	Approx. Distance from Project Facilities	Special Use Area Type	Name of Special Use Area	Land Affected Cont. (acres)	Land Affected Oper. (acres)
Northampton	Upper Nazareth Twp	62.4	350 feet	Recreational Facility	Baseball field	--	--
Northampton	Lower Nazareth Twp, Bethlehem Twp	66.9-67.3	250 feet	Park	Louse W. Moore County Park	--	--
Northampton	Bethlehem Twp	67.3	0.1 miles	Park	Matson's Woods	--	--
Northampton	Bethlehem Twp	67.9	Project Intersects Property/Area	Religious Institution	Calvary Baptist Church	1.8	0.9
Northampton	Bethlehem Twp	68.8	300 feet	Golf Course	Northampton County Country Club Golf Course	--	--
Northampton	Bethlehem Twp	69.9	0.2 miles	School	The Cambridge Schools	--	--
Northampton	Bethlehem Twp	70.1-70.4	0.1 miles	Hospital	St. Luke's Hospital	--	--
Northampton	Bethlehem Twp	70.1	315 feet	School	The Boyer School	--	--
Northampton	Williams Twp	73.3	0.2 miles	School	Klein School	--	--
Northampton	Williams Twp	73.9	0.15 miles	Park/Recreational Facility	Hexenkopf Rock	--	--
Northampton	Williams Twp	74.6	0.2 miles	Historical Site	Bridge in Williams Township	--	--
Northampton	Williams Twp	74.6	0.1 miles	Historical Site	Isaac Stout House	--	--
Hellertown Lateral							
Northampton	Lower Saucon Twp	0.9	0.1 miles	Religious Institution	2550 Applebutter Road	--	--
Northampton	Lower Saucon Twp	1	1270 feet	Recreational Facility	Woodland Hills Country Club	--	--
Northampton	Lower Saucon Twp	2.1	14 miles	Farm	Brook Hollow Farm	--	--
New Jersey Mainline							
Hunterdon	Holland Twp	79.7	150 feet	Recreational Facility	Baseball field b/	--	--
Hunterdon	Kingwood Twp	92.0	0 (HDD)	Solar farm	Frenchtown III Solar, LLC	--	--
Hunterdon	Delaware Twp	97.8	0.2 miles	Cemetery/Church	Sandy Ridge Church	--	--
Hunterdon	Delaware Twp	100.5	1160 feet	Park	Titus Property (Park land)	--	--
Hunterdon	West Amwell Twp	103.5	880 feet	Park/Recreational Facility	Hewitt Park/Baseball Fields	--	--

Table G-18

Private Recreational and Special Use Areas That Would be Crossed by or Located in Proximity to the Project Facilities

State/Facility/ County	Municipality	Nearest MP	Approx. Distance from Project Facilities	Special Use Area Type	Name of Special Use Area	Land Affected Cont. (acres)	Land Affected Oper. (acres)
Mercer	Hopewell Twp	104.5	0.2 miles	Park/Recreational Facility	Belle Mountain Ski	--	--
Mercer	Hopewell Twp	105.7	250 feet	Farm	Howell living farm	--	--
Mercer	Hopewell Twp	110.6	175 feet	Park/Recreational Facility	Hopewell Township Park/Baseball Fields	--	--
Mercer	Hopewell Twp	110.7	0.1 miles	Park	Hopewell Township Park	--	--
Mercer	Hopewell Twp	111.5	300 feet	School (Day Care)	Bright Horizons at Hopewell	--	--
Mercer	Hopewell Twp	113.7	0.2 miles	Park	Curlis Lake Woods	--	--
Mercer	Hopewell Twp	113.8	0.4 miles	Park	Mercer Meadows	--	--
Gilbert Lateral							
Hunterdon	Holland Twp	HL-0.6	60 feet	Recreational Facility	Baseball field a/	--	--
Lambertville Lateral							
Hunterdon	West Amwell Twp	0.5	1016 feet	Park	Titus Property (Park land) a/	--	--

Note:
a/ The same feature is listed for the PennEast Mainline and a lateral.

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Table G-19

Native American Outreach Conducted by PennEast

Tribe	Correspondence Date	Summary
Federally Recognized Tribes		
Absentee-Shawnee Tribe of Indians of Oklahoma	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request. No response received.
	August 4, 2015	URS e-mail to tribe as follow-up and request for formal response to Dec letter. No response received.
Cayuga Nation	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request. Representative confirmed, no response
	February 13, 2015	Telephone record to follow up on Dec letter. Receptionist provided e-mail address Timothy Two Guns.
	February 13, 2015	URS e-mail to tribe as follow-up and request for formal response to Dec letter. No response received.
	March 20, 2015	Subsequent e-mail to request response from tribe.
	August 4, 2015	E-mail to request response from tribe.
Delaware Nation	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 11, 2015	In letter, the Delaware Nation stated that no resources of interest will be endangered by the Project but requested that they be contacted in the case of unanticipated discoveries.
	February 11, 2015	E-mail from Mr. Holcomb, Delaware Nation, to URS requesting that the PennEast Project halt all construction and ground disturbance activities and immediately contact appropriate state agencies and the Delaware Nation cultural Preservation Office (within 24 hours) should the Project inadvertently uncover an archaeological site or objects.
	February 17, 2015	URS sent e-mail to Ms. Alligood, Delaware Nation to confirm that she is appropriate contact for Delaware Nation.
	February 17, 2015	Ms. Alligood confirmed that she is the appropriate contact.
Delaware Tribe of Indians	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	January 8, 2015	Delaware Tribe of Indians requested consulting party status.
	March 4, 2015	Delaware Tribe of Indians confirmed that Ms. Bachor and Ms. Fink are the appropriate tribal representatives to receive reports for review for the Project.
	September 24, 205	URS provided Phase I Archaeological Survey reports for PA and NJ to Ms. Bachor, Delaware Tribe of Indians, for review.
	October 16, 2015	Record of Telephone Conversation, Ms. Bachor, Delaware Tribe of Indians, with Ms. Aiesing, URS. Ms. Bachor has received information from Indian groups in NJ regarding a known site and requested information about Project survey status.
Eastern Shawnee Tribe of Oklahoma	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 13, 2015	URS followed up by telephone. Ms. Dushane confirmed as appropriate Section 106 contact for the tribe.

Table G-19

Native American Outreach Conducted by PennEast

Tribe	Correspondence Date	Summary
	August 4, 2015	Follow-up on Project from URS to Ms. Dushane to request a formal response regarding the tribe's possible participation in the FERC process.
Oneida Indian Nation	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	January 16, 2015	Record of Telephone Conversation, Mr. Bergevin, Oneida Nation Cultural Resource Specialist, with Ms. Ziesing, URS. Requested cultural survey status and some details and expressed concern about stone piles. Requested to be informed of sites of potential significance when they are found. He noted he is available for consultation on specific finds while crews are still in the field.
	January 20, 2015	Letter indicated Oneida Indian Nations' interest in the Project and requested information on cultural resources survey methods.
	February 6, 2015	URS letter to Oneida Indian Nation regarding field methods and recordation of stone piles.
	September 24, 2015	Transmittal of Phase I archaeological survey reports to Oneida Indian Nation for review and comment.
Oneida Nation of Wisconsin	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 13, 2015	Record of Telephone Conversation. Mr. Wyatt, AECOM, talked with Ms. Misita, Oneida Nation Land Administrator to ask about appropriate contact for Section 106 consultation. Mr. Jesse Bergevin identified as appropriate contact.
Onondaga Nation	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
Seneca Nation of Indians	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 18, 2015	Record of Telephone Conversation. Mr. Wyatt, AECOM, with Mr. Abrams. Mr. Abrams is now THPO and requested Project information.
	February 19, 2015	E-mail from the Seneca Nation of Indians noted that the tribe had no concerns with the Project and that the Nation would defer to the Delaware Nation. However, the Seneca Nation of Indians requested to be contacted if the Project scope changes or if cultural/burial sites are encountered.
Seneca-Cayuga Tribe of Oklahoma	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 13, 2015	Record of Telephone Conversation. Mr. Wyatt, AECOM, with Secretary, Seneca-Cayuga Tribe of Oklahoma. Requested a return call from Mr. Barton, THPO regarding initial consultation letter.
Shawnee Tribe	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 18, 2015	Record of Telephone Conversation. Mr. Wyatt, AECOM with K. Jumber, Shawnee Tribe THPO regarding initial consultation letter.
	February 18, 2015	E-mail follow-up from AECOM to Shawnee Tribe re-sending initial consultation letter.
	February 19, 2015	E-mail to A. Wyatt, AECOM, from Shawnee Tribe THPO, K. Jumper. THPO Department concurs that no known historic properties will be negatively impacted by the Project. If archaeological materials are encountered during construction, use, or maintenance of this location, please re-notify the tribe to resume consultation.

Table G-19

Native American Outreach Conducted by PennEast

Tribe	Correspondence Date	Summary
St. Regis Mohawk Tribe	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 18, 2015	Record of Telephone Conversation, A. Wyatt, AECOM, with A. Printup, St. Regis Mohawk Tribe THPO who requested re-send of the initial consultation letter.
	February 24, 2015	E-mail from A. Printup, St. Regis Mohawk THPO, to B. Holcomb AECOM, formally requesting to participate in the Section 106 Process for PennEast Project.
Stockbridge-Munsee Band of Mohicans	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	January 27, 2015	The Stockbridge-Munsee Band of Mohicans responded by e-mail on January 27, 2015 and requested continuing consultation. The Band's specific area of interest was in Bucks County, Pennsylvania, where the Project crossed the Delaware River. The Band requested a copy of field survey protocols that would be used by PennEast's contractor.
	February 5, 2015	E-mail from A. Wyatt, AECOM, to H. Bonney, Assistant THPO for Stockbridge-Munsee Band of Mohicans, provided archaeological field survey methods.
	February 19, 2015	Record of Telephone Conversation. S. White, THPO for Stockbridge-Munsee Band of Mohicans, to A. Wyatt, AECOM regarding new Band President, Wally Miller and environmental affairs specialist, G. Bunker. Initial request for participation in Section 106 Process was forwarded by Ms. White to W. Miller and G. Bunker.
	February 19, 2015	E-mail from A. Wyatt, AECOM, to S. White, THPO for Stockbridge-Munsee Band of Mohicans, providing December 31, 2014 letter.
	February 25, 2015	E-mail from S. White, THPO for Stockbridge-Munsee Band of Mohicans, to B. Holcomb, URS noting that Bonney Hartley would handle Section 106 consultation for the tribe.
	March 26, 2015	Letter from B. Hartley, Assistant THPO, Stockbridge-Munsee Band of Mohicans, requesting to continue consultation on the Project, the archaeological testing schedule, and requested that URS incorporate the tribe's inadvertent discovery policy into their archaeological testing protocols.
	April 9, 2015	Record of Telephone Conversation, Ms. Hartley, Assistant THPO, Stockbridge-Munsee Band of Mohicans, with G. Ziesing, J. West and A. Wyatt, AECOM regarding archaeological testing schedule as she may wish to participate.
	April 10, 2015	E-mail from B. Hartley, THPO, Stockbridge-Munsee Band of Mohicans, informs A.Wyatt, AECOM, that she has been recently appointed THPO for tribe.
	June 3, 2015	E-mails A. Wyatt, AECOM, to B. Hartley, THPO, Stockbridge-Munsee Band of Mohicans, providing archaeology field schedule and an invitation for THPO representative to join in field.
	June 5, 2015	E-mails between A. Wyatt, AECOM, and B. Hartley, THPO, Stockbridge-Munsee Band of Mohicans. Ms. Hartley is comfortable with the testing plans as discuss in April and will not send a monitor. She asked to be contacted if survey crews found large, dense sites.
	September 24, 2015	Letter transmitting Phase I Archaeological survey reports to Stockbridge-Munsee Mohican THPO by AECOM
Tonawanda Seneca Nation	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request

Table G-19

Native American Outreach Conducted by PennEast

Tribe	Correspondence Date	Summary
Tuscarora Nation	February 18, 2015	E-mail, A. Wyatt, AECOM, to Tonawanda Seneca Nation, to request comments regarding cultural resources and participation as an interested party.
	December 31, 2014	PennEast Letter to introduce Project and FERC Process Participation Request
	February 13, 2015	E-mail, A. Wyatt, AECOM, to Tuscarora Nation to request comments regarding cultural resources and participation as an interested party.

Table G-20

USDOT Class Locations by Milepost

Facility / County	Begin MP	End MP	USDOT Class a/
Pennsylvania Mainline			
Luzerne	0.0	1.2	1
Luzerne	1.2	1.9	2
Luzerne	1.9	1.9	1
Luzerne	1.9	2.5	2
Luzerne	2.5	2.8	1
Luzerne	2.8	4.4	2
Luzerne	4.4	5.1	1
Luzerne	5.1	6.8	3
Luzerne	6.8	7.1	1
Luzerne	7.1	9.5	3
Luzerne	9.5	9.7	2
Luzerne	9.7	10.5	3
Luzerne	10.5	12.6	1
Luzerne	12.6	13.0	2
Luzerne	13.0	18.9	1
Luzerne and Carbon	18.9	19.6	2
Carbon	19.6	25.7	1
Carbon	25.7	26.2	3
Carbon	26.2	31.1	1
Carbon	31.1	32.0	3
Carbon	32.0	34.1	1
Carbon	34.1	35.6	2
Carbon	35.6	42.2	1
Carbon	42.2	42.9	2
Carbon	42.9	44.1	1
Carbon	44.1	46.3	3
Carbon	46.3	47.4	2
Carbon	47.4	48.6	1
Carbon and Northampton	48.6	51.1	3
Northampton	51.1	52.2	1
Northampton	52.2	53.2	2
Northampton	53.2	53.4	1
Northampton	53.4	55.2	3
Northampton	55.2	55.9	2
Northampton	55.9	57.1	1
Northampton	57.1	58.2	2
Northampton	58.2	58.4	1
Northampton	58.4	59.2	2

Table G-20

USDOT Class Locations by Milepost

Facility / County	Begin MP	End MP	USDOT Class a/
Northampton	59.2	60.4	3
Northampton	60.4	61.4	2
Northampton	61.4	61.6	1
Northampton	61.6	62.8	3
Northampton	62.8	63.2	1
Northampton	63.2	66.4	3
Northampton	66.4	67.3	2
Northampton	67.3	70.0	3
Northampton	70.0	71.3	1
Northampton	71.3	74.2	2
Northampton	74.2	75.5	1
Northampton	75.5	76.5	2
Northampton	76.5	77.1	1
Northampton	77.1	77.4	3
Hellertown Lateral			
Northampton	0.0	1.9	2
Northampton	1.9	2.2	1
New Jersey Mainline			
Hunterdon	77.4	77.8	3
Hunterdon	77.8	81.8	1
Hunterdon	81.8	83.9	2
Hunterdon	83.9	85.2	3
Hunterdon	85.2	88.1	1
Hunterdon	88.1	88.3	3
Hunterdon	88.3	91.0	2
Hunterdon	91.0	91.9	3
Hunterdon	91.9	92.3	2
Hunterdon	92.3	92.6	1
Hunterdon	92.6	93.5	2
Hunterdon	93.5	94.1	3
Hunterdon	94.1	100.5	2
Hunterdon	100.5	101.7	1
Hunterdon	101.7	102.3	3
Hunterdon	102.3	106.6	2
Hunterdon and Mercer	106.6	109.5	1
Mercer	109.5	111.2	2
Mercer	111.2	113.9	3
Mercer	113.9	115.0	2

Table G-20

USDOT Class Locations by Milepost

Facility / County	Begin MP	End MP	USDOT Class a/
Lambertville Lateral			
Hunterdon	0.0	1.4	1
Gilbert Lateral			
Hunterdon	0.0	0.1	3

a/ Class Location Study performed per CFR Part 192.5 using 2015 aerial data and subject to additional field survey information as it becomes available

Table G-21

High Consequence and Unusually Sensitive Areas Crossed by the Pipeline Facilities, by County

Facility/County	Begin Milepost	End Milepost	HCA Type a/
Pennsylvania Mainline			
Luzerne	3.0	3.3	2
Luzerne	5.1	5.2	1
Luzerne	5.2	5.4	1,3
Luzerne	5.3	5.7	1,3
Luzerne	5.7	6.3	1,3
Luzerne	6.3	6.7	1,2,3
Luzerne	6.7	6.8	1,2
Luzerne	7.1	7.7	1,3
Luzerne	7.7	8.4	1,2,3
Luzerne	8.4	8.9	1,2
Luzerne	8.9	9.3	1
Luzerne	9.4	9.5	1
Luzerne	9.7	10.0	1
Luzerne	10.2	10.5	1,2
Luzerne	11.7	12.1	3
Luzerne	19.1	19.5	3
Carbon	25.7	26.2	1,3
Carbon	31.1	32.0	1,3
Carbon	44.1	44.3	1,3
Carbon	44.3	44.6	1,2,3
Carbon	44.6	44.8	1,2
Carbon	45.6	46.0	1,3
Carbon	46.2	46.3	1,3
Carbon	46.3	46.5	3
Carbon	48.6	49.1	1
Carbon	49.1	49.4	1,3
Carbon	49.4	50.0	1
Carbon	50.0	50.5	1,3
Carbon	50.5	50.8	1
Northampton	50.8	51.1	1
Northampton	53.2	53.8	3
Northampton	54.1	54.2	3
Northampton	54.2	54.3	1,3
Northampton	54.3	54.4	3
Northampton	54.4	54.6	2,3
Northampton	54.6	54.8	2
Northampton	54.8	55.0	3
Northampton	55.0	55.1	1,3

Table G-21

High Consequence and Unusually Sensitive Areas Crossed by the Pipeline Facilities, by County

Facility/County	Begin Milepost	End Milepost	HCA Type a/
Northampton	55.1	55.2	3
Northampton	59.1	59.6	1,3
Northampton	59.6	60.1	1
Northampton	60.1	60.3	1,2,3
Northampton	60.3	60.5	2,3
Northampton	60.9	61.0	3
Northampton	61.0	61.1	1,3
Northampton	61.1	61.3	3
Northampton	61.5	61.7	3
Northampton	61.7	62.1	1,3
Northampton	62.1	62.3	3
Northampton	62.3	62.5	1,3
Northampton	62.5	62.8	3
Northampton	63.1	63.7	1,3
Northampton	63.7	63.8	1
Northampton	63.8	64.6	1,3
Northampton	64.6	65.0	1,2,3
Northampton	65.2	65.7	1
Northampton	65.9	66.2	3
Northampton	67.4	67.7	3
Northampton	67.7	67.8	1,3
Northampton	67.8	68.0	1
Northampton	68.0	68.4	1,2
Northampton	68.4	68.8	1,2,3
Northampton	68.8	69.8	1,3
Northampton	69.8	69.9	3
Northampton	77.0	77.4	3
Hellertown Lateral			
Northampton	0.8	1.1	3
New Jersey Mainline			
Hunterdon	77.4	77.8	1,3
Hunterdon	83.9	85.2	1
Hunterdon	88.0	88.1	3
Hunterdon	88.1	88.3	1,3
Hunterdon	88.3	88.4	3
Hunterdon	90.9	91.4	3
Hunterdon	91.5	91.7	3
Hunterdon	91.7	91.9	1,3
Hunterdon	93.5	93.7	2,3

Table G-21

High Consequence and Unusually Sensitive Areas Crossed by the Pipeline Facilities, by County

Facility/County	Begin Milepost	End Milepost	HCA Type a/
Hunterdon	93.7	93.8	1,2,3
Hunterdon	93.8	94.0	2,3
Hunterdon	96.3	96.7	3
Hunterdon	101.7	102.3	1,2,3
Mercer	108.1	108.5	3
Mercer	111.2	111.7	1,3
Mercer	111.7	111.8	1,3
Mercer	112.0	113.2	1,2,3
Mercer	113.2	113.9	1,2
Gilbert Lateral			
Hunterdon	0.0	0.1	1,3
Lambertville Lateral			
Hunterdon	0.0	1.4	2

Based upon aerial data dated 2015, and subject to additional field survey information as it becomes available
a/ HCA Types:
HCA Type 1. A Class 3 location under CFR 192.5
HCA Type 2. Any area in a Class 1 or Class 2 location where the potential impact radius is greater than 660 feet, and the area within a potential impact circle contains 20 or more buildings intended for human occupancy
HCA Type 3. Any area in a Class 1 or Class 2 location where the potential impact circle contains an identified site.

Appendix H

Agency Consultation Letters

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Fisheries Science Center
James J. Howard Marine Sciences Laboratory
74 Magruder Road
Highlands, New Jersey 07732

September 18, 2014

TO: Bernard Holcomb
Pipeline Environmental Services Manager
URS Corporation
625 W. Ridge Pike, Suite E-100
Conshohocken, PA 19428

Karen Greene
(Reviewing Biologist)

SUBJECT: PennEast Pipeline Company, LLC.
PennEast Pipeline Project
Luzerne, Carbon, Northampton and Bucks Counties, PA
Hunterdon and Mercer Counties, New Jersey

We have reviewed the information provided to us regarding the above subject project. We offer the following preliminary comments pursuant to the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act:

Endangered Species Act

No threatened or endangered species under the jurisdiction of the NMFS are known to occur in the project area. As a result, further consultation by the federal action agency will not be necessary as part of the federal permit process. However, if project plans change that would alter the basis for this determination, or if new species or critical habitat is designated, consultation should be reinitiated.

Fish and Wildlife Coordination Act

The Delaware River and its tributaries are a migratory pathways and a spawning, nursery and forage habitat for anadromous fishes including striped bass, alewife, blueback herring and American shad. Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960's they have designated as a Species of Concern by NOAA. Any in-water work in these waterways should be avoided from March 1 to June 30 of each year to minimize adverse effects on migrating and spawning anadromous fishes. Wetland impacts should be avoided and minimized to the maximum extent practicable and compensatory mitigation should be provided for unavoidable wetland impacts. Any wetlands impacted temporarily should be restored. If project plans change that would alter the basis for this determination, consultation should be reinitiated.

Magnuson-Stevens Fishery Conservation and Management Act
Essential Fish Habitat

No essential fish habitat (EFH) has been designated in the project area. As a result, further EFH consultation by the federal action agency will not be necessary as part of the federal permit process. If project plans change that would alter the basis for this determination, or if new species or EFH is designated, consultation should be reinitiated. For a listing of EFH and further information, please go to our website at: www.greateratlantic.fisheries.noaa.gov/habitat. If you wish to discuss this further, please call me at (7320 872-3023 or e-mail karen.greene@noaa.gov.

U.S. Fish and Wildlife Service

Trust Resources List

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

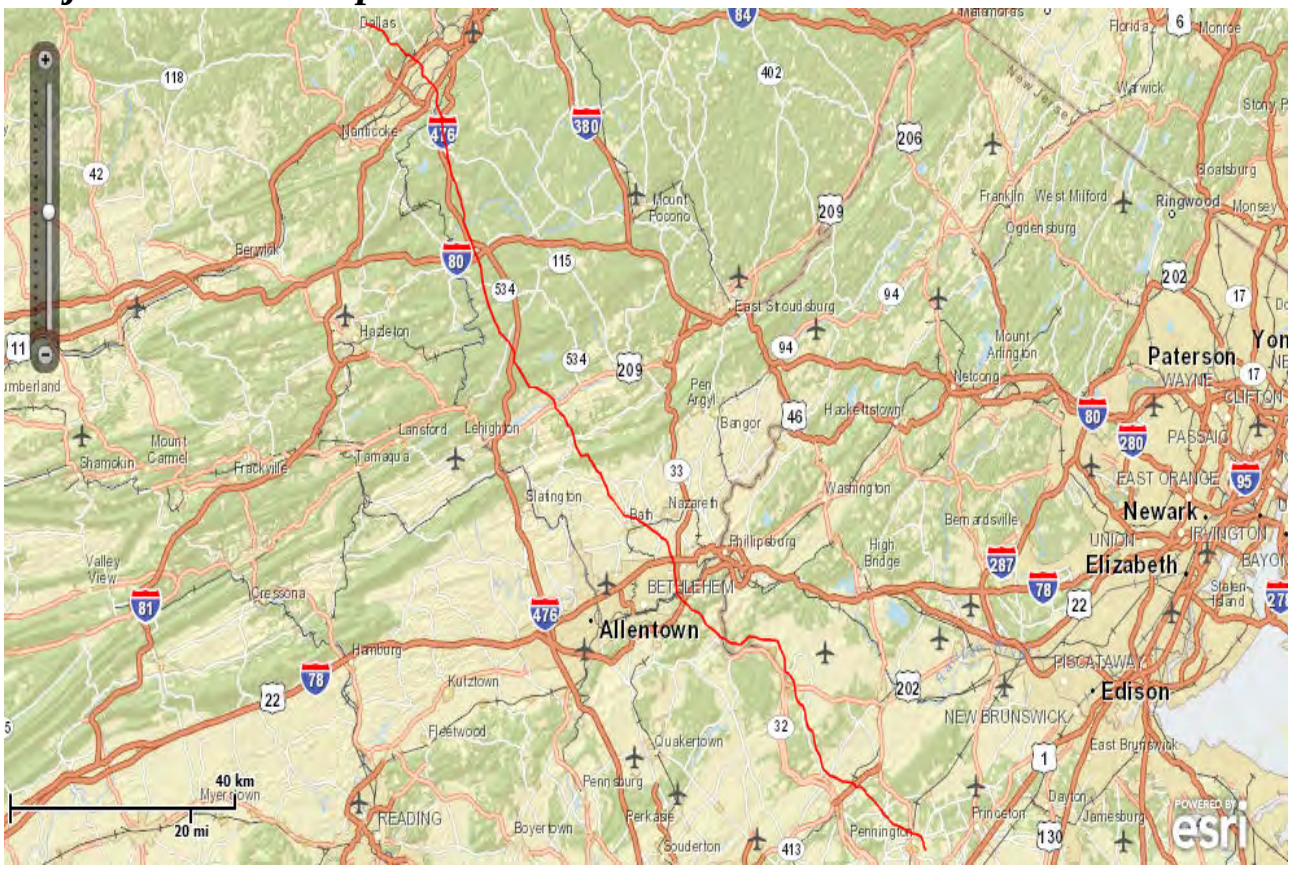
New Jersey Ecological Services Field Office
927 NORTH MAIN STREET, BUILDING D
PLEASANTVILLE, NJ 8232
(609) 646-9310
http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

Pennsylvania Ecological Services Field Office
315 SOUTH ALLEN STREET, SUITE 322
STATE COLLEGE, PA 16801
(814) 234-4090
http://www.fws.gov/northeast/pafo/

U.S. Fish and Wildlife Service

Trust Resources List

Project Location Map:



Project Counties:

Hunterdon, NJ | Mercer, NJ | Bucks, PA | Carbon, PA | Luzerne, PA | Northampton, PA

U.S. Fish and Wildlife Service

Trust Resources List

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-75.8945641 41.3232248, -75.892859 41.3231769, -75.8862493 41.3239501, -75.8823306 41.3236753, -75.867281 41.3127669, -75.8650316 41.3107469, -75.8637068 41.3100578, -75.8596854 41.3109191, -75.8560937 41.3106013, -75.8537401 41.3085134, -75.8429455 41.3033103, -75.8418229 41.3023648, -75.8406024 41.3028673, -75.8399298 41.3027665, -75.8324169 41.2981238, -75.8269698 41.294262, -75.8271043 41.2936055, -75.8295911 41.2924396, -75.8296773 41.2917149, -75.8295766 41.2911689, -75.8273525 41.2899972, -75.8290887 41.2870647, -75.8280381 41.2842366, -75.8266722 41.2833431, -75.8242271 41.2829544, -75.8225637 41.2830074, -75.8189982 41.2810281, -75.8161317 41.2789701, -75.8142584 41.276536, -75.8111047 41.2753132, -75.809212 41.2752094, -75.7975496 41.2662509, -75.797912 41.2647394, -75.7966086 41.2633383, -75.7964069 41.2586057, -75.7982387 41.253224, -75.7984629 41.2514082, -75.7978177 41.2490196, -75.7970546 41.2464732, -75.7893301 41.2362183, -75.7881558 41.2353199, -75.7871263 41.2308991, -75.7854177 41.2167821, -75.7842751 41.2121767, -75.7820424 41.2050555, -75.7755442 41.1918461, -75.7753757 41.1832393, -75.7702577 41.1740902, -75.7668183 41.1618254, -75.7605398 41.1537989, -75.7575816 41.1505212, -75.7541941 41.1425717, -75.7476928 41.1327497, -75.7447988 41.123562, -75.7402262 41.1152958, -75.7393359 41.1080086, -75.7411847 41.1037388, -75.7408917 41.1015207, -75.734383 41.0930507, -75.7279689 41.08235, -75.7240314 41.078372, -75.7189472 41.0682562, -75.7144669 41.0614158, -75.7125576 41.059717, -75.7044637 41.0463177, -75.7005298 41.0266284, -75.6892183 41.0013218, -75.6818147 40.9892995, -75.6754305 40.9800318, -75.6727396 40.976737, -75.6671854 40.9711282, -75.6655627 40.9684843, -75.6651257 40.9656701, -75.6554322 40.9606713, -75.6535657 40.9591897, -75.6527139 40.9579882, -75.6488702 40.9557452, -75.6472434 40.955616, -75.6439942 40.9535559, -75.643805 40.9530681, -75.6445736 40.9516936, -75.6399601 40.9487811, -75.6392234 40.94625, -75.638469 40.9453348, -75.6352621 40.9436617, -75.6336081 40.9376208, -75.6344905 40.9295816, -75.6248063 40.9217568, -75.6087123 40.9045067, -75.6015168 40.898196, -75.5908615 40.8979121, -75.5793253 40.8950528, -75.5743826 40.8924649, -75.5648254 40.8896297, -75.5509829 40.8821648, -75.5472369 40.8764362, -75.546525 40.8710722, -75.5443381 40.8697626, -75.5418082 40.8693543, -75.5362946 40.8651218, -75.5287432 40.8611185, -75.5238811 40.855364, -75.5226201 40.8527852, -75.5203509 40.8501069, -75.5155996 40.8483579, -75.5134006 40.8459205, -75.5085102 40.838562, -75.5036641 40.8246249, -75.4927734 40.8121216, -75.4844845 40.8133667, -75.4786809 40.8139557, -75.4780831 40.8138064, -75.4736538 40.8071691, -75.4703697 40.8052978, -75.4592749 40.7939266, -75.4552593 40.7912569, -75.4511791 40.7902464, -75.447574 40.7843414, -75.4371798 40.7718838, -75.4339032 40.7630245, -75.4233293 40.7563055, -75.4015741 40.7380434, -75.3915329 40.7362171, -75.3764868 40.7349441, -75.3687802 40.7307312, -75.3567121 40.72676, -75.3433074 40.7203294, -75.3331991 40.7167568, -75.3253304 40.7124434, -75.3238343 40.711293, -75.3232218 40.710254, -75.3133763 40.7075467, -75.3067008 40.7006302, -75.3053572 40.6931066, -75.2976124 40.6825158, -75.2972792 40.6808997, -75.2944979 40.6752581, -75.2948174 40.6663668, -75.2937754 40.6637261, -75.2933152 40.6612643, -75.2917154 40.657654, -75.2924991 40.6555761, -75.2917529 40.6509527, -75.2906138 40.6491414, -75.287787 40.6380123, -75.2798608 40.633242, -75.2751973 40.6299054, -75.2724053 40.6291896, -75.2640618 40.6245556, -75.2584865 40.6199093, -75.2448245 40.6171591, -75.2414285 40.6155703, -75.2370308 40.6125314, -75.2284732 40.6023864, -75.2236941 40.5995731, -75.217097 40.5969254, -75.2133755 40.5949775, -75.2065913 40.5921418, -75.1956944 40.5847092, -75.1877344 40.5835339, -75.174851 40.5780016, -75.1685794 40.5783089, -75.1629426 40.5772481, -75.1580338 40.5766724, -75.1549187 40.5771717, -75.1437367 40.5826582, -75.1360896 40.5875827, -75.1337995 40.5863351, -75.1255498 40.5860378, -75.1235771 40.5863869, -75.118479 40.5841929,

U.S. Fish and Wildlife Service

Trust Resources List

Project Type:

Oil Or Gas

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **5** threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Fishes	Status		Has Critical Habitat	Contact
Shortnose sturgeon (*Acipenser brevirostrum*) Population: Entire	Endangered	species info		Pennsylvania Ecological Services Field Office
Flowering Plants				
Northeastern bulrush (*Scirpus ancistrochaetus*)	Endangered	species info		Pennsylvania Ecological Services Field Office
Mammals				
Indiana bat (*Myotis sodalis*) Population: Entire	Endangered	species info		New Jersey Ecological Services Field Office, Pennsylvania Ecological Services Field Office
northern long-eared Bat (*Myotis septentrionalis*) Population:	Proposed Endangered	species info		New Jersey Ecological Services Field Office
Reptiles				
Bog Turtle (*Clemmys muhlenbergii*) Population: northern	Threatened	species info		New Jersey Ecological Services Field Office, Pennsylvania Ecological Services Field Office

U.S. Fish and Wildlife Service

Trust Resources List

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html.

Migratory birds of concern that may be affected by your project:

There are **14** birds on your Migratory birds of concern list. The Division of Migratory Bird Management is in the process of populating migratory bird data with an estimated completion time of Fall 2014; therefore, the list below may not include all the migratory birds of concern in your project area at this time. While this information is being populated, please contact the Field Office for information about migratory birds in your project area.

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area

Trust Resources List

American Oystercatcher (*Haematopus palliatus*)	Yes	species info	Year-round
American bittern (*Botaurus lentiginosus*)	Yes	species info	Breeding
Bald eagle (*Haliaeetus leucocephalus*)	Yes	species info	Year-round
Black-billed Cuckoo (*Coccyzus erythropthalmus*)	Yes	species info	Breeding
Canada Warbler (*Wilsonia canadensis*)	Yes	species info	Breeding
cerulean warbler (*Dendroica cerulea*)	Yes	species info	Breeding
Golden-Winged Warbler (*Vermivora chrysoptera*)	Yes	species info	Breeding
Least Bittern (*Ixobrychus exilis*)	Yes	species info	Breeding
Louisiana Waterthrush (*Parkesia motacilla*)	Yes	species info	Breeding
Pied-billed Grebe (*Podilymbus podiceps*)	Yes	species info	Year-round, Breeding
Purple Sandpiper (*Calidris maritima*)	Yes	species info	Wintering
Rusty Blackbird (*Euphagus carolinus*)	Yes	species info	Wintering
Wood Thrush (*Hylocichla mustelina*)	Yes	species info	Breeding
Worm eating Warbler (*Helmitheros vermivorum*)	Yes	species info	Breeding

U.S. Fish and Wildlife Service

Trust Resources List

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

Data Limitations, Exclusions and Precautions
The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the

Trust Resources List

advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC is unable to display wetland information at this time.

U.S. Fish and Wildlife Service

Trust Resources List

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

New Jersey Ecological Services Field Office
927 NORTH MAIN STREET, BUILDING D
PLEASANTVILLE, NJ 8232
(609) 646-9310
http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

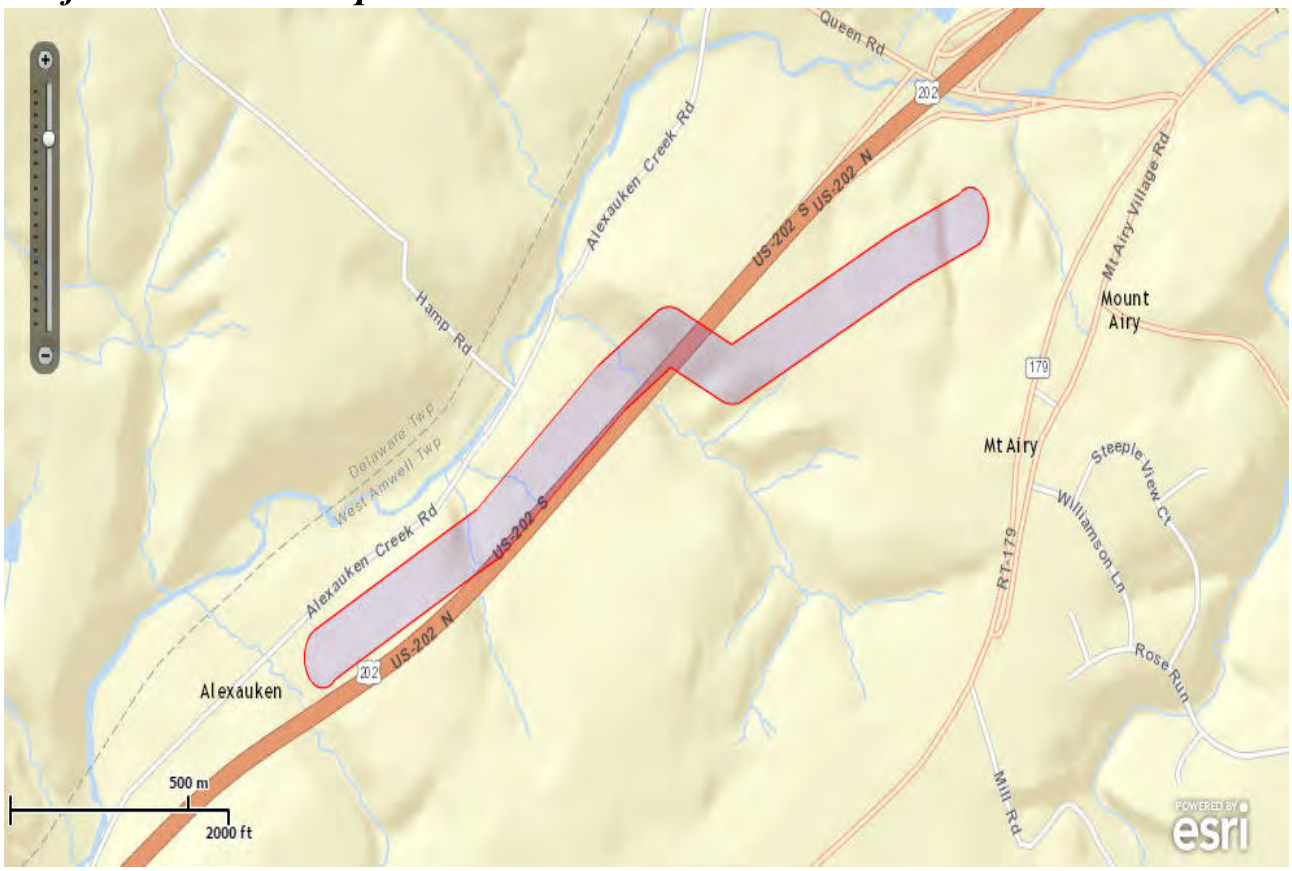
Project Name:

PE NJ Lambertville Lat

U.S. Fish and Wildlife Service

Trust Resources List

Project Location Map:



Project Counties:

Hunterdon, NJ

U.S. Fish and Wildlife Service

Trust Resources List

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-74.9137109 40.3992847, -74.9193992 40.396956, -74.9196244 40.3969351, -74.9198478 40.3969699, -74.9216242 40.3976517, -74.9231608 40.3968156, -74.9272188 40.3939774, -74.9327155 40.3915598, -74.9329302 40.3914229, -74.9331822 40.391387, -74.9334265 40.3914587, -74.933578 40.3915759, -74.9337086 40.3917944, -74.9337403 40.3919833, -74.9336878 40.3922324, -74.9335827 40.3923926, -74.9334326 40.3925116, -74.9280456 40.3948797, -74.9240835 40.3976587, -74.9220347 40.3987711, -74.9217384 40.3988392, -74.9214361 40.3988057, -74.9196066 40.3981033, -74.9143627 40.4002639, -74.9121071 40.4010348, -74.9118812 40.401155, -74.9116898 40.4011755, -74.9115019 40.4011333, -74.9113377 40.4010329, -74.9112145 40.4008849, -74.9111454 40.4007052, -74.9111494 40.4004494, -74.9112612 40.4002193, -74.9114039 40.4000901, -74.9137109 40.3992847)))

Project Type:

Oil Or Gas

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **2** threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Mammals	Status		Has Critical Habitat	Contact
Indiana bat (*Myotis sodalis*) Population: Entire	Endangered	species info		New Jersey Ecological Services Field Office
northern long-eared Bat (*Myotis septentrionalis*) Population:	Proposed Endangered	species info		New Jersey Ecological Services Field Office

Critical habitats within your project area:

There are no critical habitats within your project area.

U.S. Fish and Wildlife Service

Trust Resources List

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: http://www.fws.gov/migratorybirds/CCMB2.htm.

For information about conservation measures that help avoid or minimize impacts to birds, please visit:
http://www.fws.gov/migratorybirds/CCMB2.htm.

Migratory birds of concern that may be affected by your project:
There are **19** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to the ECOS Help Desk.

U.S. Fish and Wildlife Service

Trust Resources List

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
American bittern (*Botaurus lentiginosus*)	Yes	species info	Breeding
Bald eagle (*Haliaeetus leucocephalus*)	Yes	species info	Year-round
Black-billed Cuckoo (*Coccyzus erythropthalmus*)	Yes	species info	Breeding
Blue-winged Warbler (*Vermivora pinus*)	Yes	species info	Breeding
Canada Warbler (*Wilsonia canadensis*)	Yes	species info	Breeding
Fox Sparrow (*Passerella liaca*)	Yes	species info	Wintering
Golden-Winged Warbler (*Vermivora chrysoptera*)	Yes	species info	Breeding
Kentucky Warbler (*Oporornis formosus*)	Yes	species info	Breeding
Peregrine Falcon (*Falco peregrinus*)	Yes	species info	Wintering
Pied-billed Grebe (*Podilymbus podiceps*)	Yes	species info	Year-round
Prairie Warbler (*Dendroica discolor*)	Yes	species info	Breeding
Purple Sandpiper (*Calidris maritima*)	Yes	species info	Wintering
Red Knot (*Calidris canutus rufa*)	Yes	species info	Wintering
Rusty Blackbird (*Euphagus carolinus*)	Yes	species info	Wintering
Short-eared Owl (*Asio flammeus*)	Yes	species info	Wintering
Snowy Egret (*Egretta thula*)	Yes	species info	Breeding
Upland Sandpiper (*Bartramia longicauda*)	Yes	species info	Breeding

Wood Thrush (*Hylocichla mustelina*)	Yes	species info	Breeding
Worm eating Warbler (*Helmitheros vermivorum*)	Yes	species info	Breeding

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

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The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

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nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

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IPaC is unable to display wetland information at this time.

U.S. Fish and Wildlife Service

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927 NORTH MAIN STREET, BUILDING D
PLEASANTVILLE, NJ 8232
(609) 646-9310
http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

Pennsylvania Ecological Services Field Office
315 SOUTH ALLEN STREET, SUITE 322
STATE COLLEGE, PA 16801
(814) 234-4090
http://www.fws.gov/northeast/pafo/

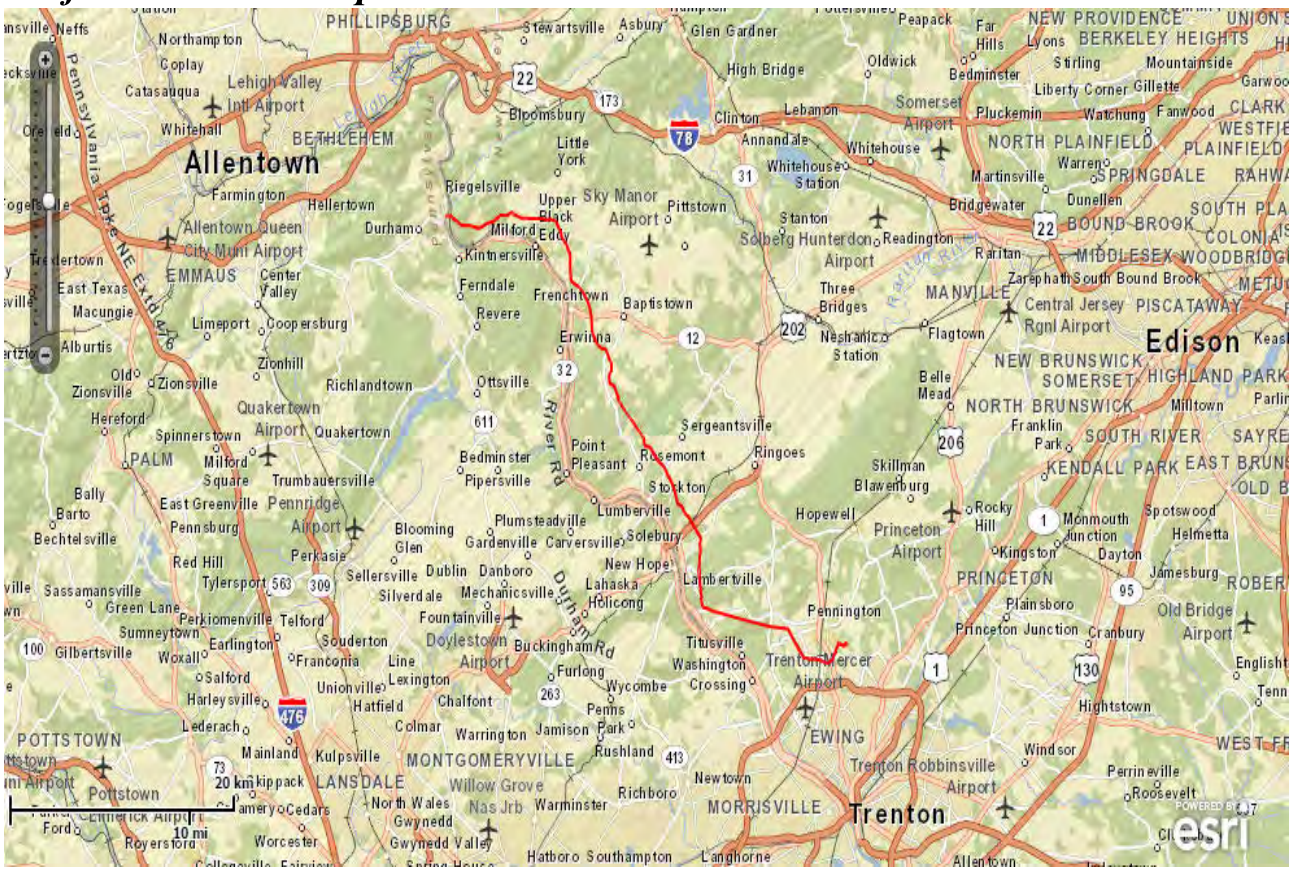
Project Name:

PE NJ align

U.S. Fish and Wildlife Service

Trust Resources List

Project Location Map:



Project Counties:

Hunterdon, NJ | Mercer, NJ | Bucks, PA

U.S. Fish and Wildlife Service

Trust Resources List

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-75.1937706 40.5834613, -75.1928034 40.5844786, -75.1876452 40.5839922,
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-74.9243584 40.3665319, -74.9243821 40.3663927, -74.9244857 40.3661646, -74.9244099 40.3643975,
-74.9245168 40.3641401, -74.9250596 40.3636801, -74.9248192 40.3574889, -74.9242068 40.3570774,

U.S. Fish and Wildlife Service

Trust Resources List

Project Type:

Oil Or Gas

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **4** threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Fishes	Status		Has Critical Habitat	Contact
Shortnose sturgeon (*Acipenser brevirostrum*) Population: Entire	Endangered	species info		Pennsylvania Ecological Services Field Office
Mammals				
Indiana bat (*Myotis sodalis*) Population: Entire	Endangered	species info		New Jersey Ecological Services Field Office, Pennsylvania Ecological Services Field Office
northern long-eared Bat (*Myotis septentrionalis*) Population:	Proposed Endangered	species info		New Jersey Ecological Services Field Office
Reptiles				
Bog Turtle (*Clemmys muhlenbergii*) Population: northern	Threatened	species info		New Jersey Ecological Services Field Office, Pennsylvania Ecological Services Field Office

Critical habitats within your project area:

There are no critical habitats within your project area.

U.S. Fish and Wildlife Service

Trust Resources List

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: http://www.fws.gov/migratorybirds/CCMB2.htm.

For information about conservation measures that help avoid or minimize impacts to birds, please visit:
http://www.fws.gov/migratorybirds/CCMB2.htm.

Migratory birds of concern that may be affected by your project:
There are **23** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to the ECOS Help Desk.

Trust Resources List

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
American Oystercatcher (*Haematopus palliatus*)	Yes	species info	Year-round
American bittern (*Botaurus lentiginosus*)	Yes	species info	Breeding
Bald eagle (*Haliaeetus leucocephalus*)	Yes	species info	Year-round
Black-billed Cuckoo (*Coccyzus erythropthalmus*)	Yes	species info	Breeding
Blue-winged Warbler (*Vermivora pinus*)	Yes	species info	Breeding
Canada Warbler (*Wilsonia canadensis*)	Yes	species info	Breeding
cerulean warbler (*Dendroica cerulea*)	Yes	species info	Breeding
Fox Sparrow (*Passerella liaca*)	Yes	species info	Wintering
Golden-Winged Warbler (*Vermivora chrysoptera*)	Yes	species info	Breeding
Kentucky Warbler (*Oporornis formosus*)	Yes	species info	Breeding
Least Bittern (*Ixobrychus exilis*)	Yes	species info	Breeding
Louisiana Waterthrush (*Parkesia motacilla*)	Yes	species info	Breeding
Peregrine Falcon (*Falco peregrinus*)	Yes	species info	Wintering
Pied-billed Grebe (*Podilymbus podiceps*)	Yes	species info	Year-round
Prairie Warbler (*Dendroica discolor*)	Yes	species info	Breeding
Purple Sandpiper (*Calidris maritima*)	Yes	species info	Wintering
Red Knot (*Calidris canutus rufa*)	Yes	species info	Wintering

Trust Resources List

Rusty Blackbird (*Euphagus carolinus*)	Yes	species info	Wintering
Short-eared Owl (*Asio flammeus*)	Yes	species info	Wintering
Snowy Egret (*Egretta thula*)	Yes	species info	Breeding
Upland Sandpiper (*Bartramia longicauda*)	Yes	species info	Breeding
Wood Thrush (*Hylocichla mustelina*)	Yes	species info	Breeding
Worm eating Warbler (*Helmitheros vermivorum*)	Yes	species info	Breeding

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

Data Limitations, Exclusions and Precautions
The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Trust Resources List

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

The following wetland types intersect your project area in one or more locations:

Wetland Types	NWI Classification Code	Total Acres
Freshwater Emergent Wetland	PEM1C	3.561
Freshwater Emergent Wetland	PEM1/SS1C	2.1358
Freshwater Emergent Wetland	PEM1A	27.6055
Freshwater Emergent Wetland	PEM1B	4.6516
Freshwater Emergent Wetland	PEM1/SS1B	2.0307
Freshwater Emergent Wetland	PEM1Eh	0.3665
Freshwater Forested/Shrub Wetland	PFO1	7.6553
Freshwater Forested/Shrub Wetland	PFO1/SS1B	3.8509
Freshwater Forested/Shrub Wetland	PSS1B	3.3889
Freshwater Forested/Shrub Wetland	PFO1B	53.1257
Freshwater Forested/Shrub Wetland	PFO1C	32.548
Freshwater Forested/Shrub Wetland	PFO1A	71.1713

Trust Resources List

Freshwater Pond	PUBFx	0.0674
Freshwater Pond	PUBHx	0.8738
Freshwater Pond	PUBHh	5.9886
Riverine	R2UBH	6523.8724

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

September 30, 2014

Bernard Holcomb
URS Corporation
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428

RE: USFWS Project #2014-1013

Dear Mr. Holcomb:

This responds to your letter dated August 12, 2014, requesting information about federally listed and proposed endangered and threatened species within the area affected by the proposed 100-mile, 30-inch PennEast natural gas pipeline project located in Luzerne, Carbon, Northampton, and Bucks counties, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species and the Migratory Bird Treaty Act (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended), and the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended; 16 U.S.C. 668-668d) to ensure the protection of migratory bird species.

Indiana bat

The project is within the range of the Indiana bat (*Myotis sodalis*), a species that is federally listed as endangered. Indiana bats hibernate in caves and abandoned mines during the winter months (November through March), and use a variety of upland, wetland and riparian habitats during the spring, summer and fall. Indiana bats usually roost in dead or living trees with exfoliating bark, crevices or cavities. Female Indiana bats form nursery colonies under the exfoliating bark of dead or living trees, such as shagbark hickory, black birch, red oak, white oak, and sugar maple, in upland or riparian areas.

Land-clearing, especially of forested areas, may adversely affect Indiana bats by killing, injuring or harassing roosting bats, and by removing or reducing the quality of foraging and roosting habitat. Therefore, to determine whether the proposed project will affect Indiana bats, we will need additional project information, including site plans and a detailed project description, that describe how much forest disturbance will occur (area, tree species, and size classes).

Additionally, your project is located within the range of the federally proposed endangered northern long-eared bat (*Myotis septentrionalis*). The northern long-eared bat was proposed for listing as an endangered species on October 2, 2013. No critical habitat has been proposed at this time. Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective, the prohibition against jeopardizing its continued existence and "take"[1] applies **regardless of an action's stage of completion**. Therefore, to avoid project delays we recommend that the effect of the project on northern long eared bats, and their habitat, be considered during the project planning and design. Additional information about northern long-eared bats, including ecology, habitat descriptions, listing status updates, and possible conservation measures may be found at *www.fws.gov/midwest/endangered/mammals/nlba/index.html* (click on Northern Long-eared Bat Interim Conference and Planning Guidance). We are available to discuss potential conservation measures specific to your project design.

Northeastern bulrush

The project area is within the known range of the northeastern bulrush (*Scirpus ancistrochaetus*), a federally listed, endangered plant. Potential habitat for this species could be affected if the project will directly or indirectly affect wetlands within Carbon County. The northeastern bulrush is typically found in ponds, wet depressions, shallow sinkholes, vernal pools, small emergent wetlands, or beaver-influenced wetlands. These wetlands are often located in forested areas and characterized by seasonally variable water levels at elevations of 1300 feet and greater.

To conserve northeastern bulrush (if present) and other wetland-dependent species of concern, project-related activities should avoid adversely affecting the surface and groundwater recharge areas. This would include establishment of 300-foot wide upland buffer areas around wetlands, as well as 50 to 100 foot wide buffers along waterways (perennial and intermittent rivers, streams, creeks and tributaries). When adequately vegetated, these buffers will act to filter pollutants and stabilize streambanks. Earth disturbance, spraying or tree-cutting activities (tree felling, skid trails etc.), should not occur in these wetlands and their buffers. If these buffers are included, implementation of the proposed project is not likely to adversely affect the northeasten bulrush.

If you are unable to adopt the buffer restrictions detailed above, we recommend that a qualified botanist with field experience in the identification of this species conduct a thorough survey of all potentially suitable wetland habitat within the proposed project area to determine the presence of the northeastern bulrush before any permits are approved or earth-moving activities begin. Surveys for this species should be conducted between June 1 and September 30, when the flowering/fruiting culm is present. A survey report should be submitted to the Service for review

[1] As defined in the Act, take means ". . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" in the definition of take means an act which kills or injures wildlife. Such act may include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 CFR part 17.3). "Harass" means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.

and comment. A list of botanists skilled in the location and identification of the northeastern bulrush is enclosed.

Bog turtle

The project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. Particularly for this project, the species may be found in Bucks, Northampton, and Carbon Counties. Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. Bog turtles usually occur in small, discrete populations occupying suitable wetland habitat dispersed along a watershed. The occupied "intermediate successional stage" wetland habitat is usually a mosaic of micro-habitats ranging from dry pockets, to areas that are saturated with water, to areas that are periodically flooded. Some wetlands occupied by bog turtles are located in agricultural areas and are subject to grazing by livestock.

To determine the potential effects of the proposed project on bog turtles and their habitat, begin by identifying all wetlands in, and within 300 feet of, the project area. The project area includes all areas that will be permanently or temporarily affected by any and all project features, including building, roads, staging areas, utility lines, outfall and intake structures, wells, stormwater retention or detention basins, parking lots, driveways, lawns, etc. The area of investigation should be expanded when project effects might extend more than 300 feet from the project footprint. For example, the hydrological effects of some projects (*e.g.*, large residential or commercial developments; golf courses; community water supply wells) might extend well beyond the project footprint due to the effects that impervious surfaces or groundwater pumping may have on the hydrology of nearby groundwater-dependent wetlands. Wetlands should be included on a map showing existing and proposed project features.

If someone qualified to identify and delineate wetlands has, through a field investigation, determined that no wetlands are located in or within 300 feet of the project area (or within the expanded investigation area, as described above), it is not likely that your project will adversely affect the bog turtle. If this is the case, no further consultation with the Fish and Wildlife Service is necessary, although we would appreciate receiving a courtesy copy of the wetland investigator's findings for our files.

If wetlands have been identified in, or within 300 feet of, the project area (or in an expanded investigation area, as described above), assess their potential suitability as bog turtle habitat, as described under "*Bog Turtle Habitat Survey*" (Phase 1 survey) of the *Guidelines for Bog Turtle Surveys* (revised April 2006). Survey results should be submitted to the Service for review and concurrence. The survey guidelines, as well as a Phase 1 field form and report template, are available from the Service upon request.

Due to the skill required to correctly identify potential bog turtle habitat, we recommend that the Phase 1 survey be done by a qualified surveyor (see enclosed list). If the Phase 1 survey is done by someone who is not on this list, it is likely that a site visit by a Fish and Wildlife Service biologist will be necessary to verify their findings. *Due to the limited availability of staff from*

this office, such a visit may not be possible for some time. Use of a qualified surveyor will expedite our review of the survey results.

If potential bog turtle habitat is found in or near the project area, efforts should be made to avoid any direct or indirect impacts to those wetlands (see enclosed *Bog Turtle Conservation Zones*). Avoidance of direct and indirect effects means no disturbance to or encroachment into the wetlands (*e.g.*, filling, ditching or draining) for any project-associated features or activities. Adverse effects may also be anticipated to occur when lot lines include portions of the wetland; when an adequate upland buffer is not retained around the wetland (see *Bog Turtle Conservation Zones*); or when roads, stormwater/sedimentation basins, impervious surfaces, or wells affect the hydrology of the wetland.

If potential habitat is found, submit (along with your Phase 1 survey results) a detailed project description and detailed project plans documenting how direct and indirect impacts to the wetlands will be avoided. If adverse effects to these wetlands cannot be avoided, a more detailed and thorough survey should be done, as described under "*Bog Turtle Survey*" (Phase 2 survey) of the *Guidelines*. The Phase 2 survey should be conducted by a qualified biologist with bog turtle field survey experience (see enclosed list of qualified surveyors). Submit survey results to the Service for review and concurrence.

Based on the shapefiles that were provided with your August 12, 2014 letter, we would like to inform you that the proposed pipeline is crossing a known bog turtle site less than a mile from the boarder of Northampton County into Bucks County. We look forward to working with you in order to avoid impacts to this area as well as other potential and occupied bog turtle areas in these counties.

Assessment of Risks to Migratory Birds

The Service is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species. The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for authorizing incidental take, the Service recognizes that some birds may be killed even if all reasonable measures to avoid take are implemented.

The potential exists for avian mortality from habitat destruction and alteration associated with vegetation clearing and fragmentation within the project boundaries. Resources are available to assist you in determining which species are likely to be present within your project area (see attached enclosure) to determine appropriate conservation measures to reduce impacts to migratory birds. Site-specific factors that should be considered in project siting to avoid and minimize the risk to birds include avian abundance; the quality, quantity and type of habitat; geographic location; type and extent of bird use (*e.g.* breeding, foraging, migrating, etc.); and landscape features. Please review the enclosed information for general recommendations for avoiding and minimizing impacts to migratory birds within and around the project area. Be aware that since these are general guidelines, some of them may not be applicable or may have already been included in the project design.

Your project is located in the vicinity of the Important Bird Area (IBA) known as Hawk Mountain and Kittatinny Ridge. IBAs are designated by the Pennsylvania Ornithological Technical Committee. They are the most critical regions in the Commonwealth for conserving bird diversity and abundance, and are the primary focus of Audubon Pennsylvania's conservation efforts. To find out more information about this IBA, including which bird species breed there, visit: http://netapp.audubon.org/IBA/State/US-PA

In addition to protection under the MBTA, bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (Eagle Act). The Eagle Act protects eagles by prohibiting killing, selling, disturbing, or otherwise harming eagles, their nests or eggs. "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle; 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

Consequently, we recommend that you evaluate the project type, size, location and layout in light of the *National Bald Eagle Management Guidelines* to determine whether or not bald eagles might be disturbed as a direct or indirect result of this project. If it appears that disturbance may occur, we recommend that you consider modifying your project consistent with the *Guidelines*. These guidelines, as well as additional eagle information, are available at http://www.fws.gov/northeast/EcologicalServices/eagle.html To assist you in making a decision regarding impacts to bald eagles, a screening form can be found at http://www.fws.gov/northeast/pafo/bald_eagle.html

Summary

In cases where adverse effects to federally listed species cannot be avoided, further consultation with the Service would be necessary to avoid potential violations of section 9 (prohibiting "take" of listed species) and/or section 7 (requiring federal agencies to consult) of the Endangered Species Act. Information about the section 7 and section 10 consultation processes (for federal and non-federal actions, respectively) can be obtained by contacting this office or accessing the Service's Endangered Species Home Page (http://endangered.fws.gov).

This response relates only to endangered and threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities. A compilation of certain federal status species in Pennsylvania is enclosed for your information.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

Please contact Kayla Easler of this office at (814) 234-4090 if you have any questions or require further assistance regarding this matter.

Sincerely,

Lora L. Zimmerman
Field Office Supervisor

cc:
PAFBC – Gipe
USACOE

Enclosures

PENNSYLVANIA FISH & BOAT COMMISSION
Division of Environmental Services
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823-9620

QUALIFIED SURVEYORS FOR BOG TURTLE

58 Pa. Code §75.5 provides that in order to conduct surveys for endangered or threatened fish (fish, amphibians, reptiles and aquatic invertebrates) species or their habitat in connection with an application for a proposed or planned development activity, a surveyor must be deemed qualified by the Pennsylvania Fish and Boat Commission (PFBC). An individual who wishes to be qualified by the PFBC to conduct surveys for endangered or threatened species must demonstrate to the PFBC's satisfaction that he or she meets the qualified surveyor requirements as approved by the Executive Director and published in the *Pennsylvania Bulletin*. The following list includes persons deemed qualified by the PFBC to possess skills and to have experience in properly searching for and finding Bog Turtles (*Glyptemys muhlenbergii*) and in identifying their critical habitat. Persons not on this list but who have documented experience in conducting scientific studies of, or successful searches for, Bog Turtles and their critical habitat may submit their qualifications to the Natural Diversity Section for review and possible inclusion as a qualified surveyor. When applicable, a qualified surveyor must meet the requirements pertaining to scientific collector's permits and special permits for endangered and threatened species. All permitted collector's encounters with Bog Turtles must be reported in writing to the PFBC's Natural Diversity Section.

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Stanley Boder Wildlife Specialists, LLC 942 Camp Trail Road Quakertown, PA 18951 (570)952-1169 stan@wildlife-specialists.com	Andy Brookens Skelly and Loy, Inc. 449 Eisenhower Blvd. Suite 300 Harrisburg, PA 17111 (717)232-0593 abrookens@skellyloy.com	Robert Bull The Wilson T. Ballard Company 4287 Fissel's Church Road Glen Rock, PA 17327 (717)424-9817 rbull@wtbco.com
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*Conditionally approved for 2014.

BOG TURTLE CONSERVATION ZONES[1]

(revised April 18, 2001)

Projects in and adjacent to bog turtle habitat can cause habitat destruction, degradation and fragmentation. Of critical importance is evaluating the potential direct and indirect effects of activities that occur in or are proposed for upland areas adjacent to bog turtle habitat. Even if the wetland impacts from an activity are avoided (i.e., the activity does not result in encroachment into the wetland), activities in adjacent upland areas can seriously compromise wetland habitat quality, fragment travel corridors, and alter wetland hydrology, thereby adversely affecting bog turtles.

The following bog turtle conservation zones have been designated with the intent of protecting and recovering known bog turtle populations within the northern range of this species. The conservation suggestions for each zone are meant to guide the evaluation of activities that may affect high-potential bog turtle habitat, potential travel corridors, and adjacent upland habitat that may serve to buffer bog turtles from indirect effects. *Nevertheless, it is important to recognize that consultations and project reviews will continue to be conducted on a case-by-case basis, taking into account site- and project-specific characteristics.*

Zone 1

This zone includes the wetland and visible spring seeps occupied by bog turtles. Bog turtles rely upon different portions of the wetland at different times of year to fulfill various needs; therefore, this zone includes the entire wetland (the delineation of which will be scientifically based), not just those portions that have been identified as, or appear to be, optimal for nesting, basking or hibernating. In this zone, bog turtles and their habitat are most vulnerable to disturbance, therefore, the greatest degree of protection is necessary.

Within this zone, the following activities are likely to result in habitat destruction or degradation and should be avoided. These activities (not in priority order) include:

- development (e.g., roads, sewer lines, utility lines, storm water or sedimentation basins, residences, driveways, parking lots, and other structures)
- wetland draining, ditching, tiling, filling, excavation, stream diversion and construction of impoundments
- heavy grazing
- herbicide, pesticide or fertilizer application[2]
- mowing or cutting of vegetation[2]
- mining
- delineation of lot lines (e.g., for development, even if the proposed building or structure will not be in the wetland)

Some activities within this zone may be compatible with bog turtle conservation but warrant careful evaluation on a case-by-case basis:

- light to moderate grazing
- non-motorized recreational use (e.g., hiking, hunting, fishing)

Zone 2

The boundary of this zone extends *at least 300 feet* from the edge of Zone 1 and includes upland areas adjacent to Zone 1. Activities in this zone could indirectly destroy or degrade wetland habitat over the short or long-term, thereby adversely affecting bog turtles. In addition, activities in this zone have the potential to cut off travel corridors between wetlands occupied or likely to be occupied by bog turtles, thereby isolating or dividing populations and increasing the risk of turtles being killed while attempting to disperse. Some of the indirect effects to wetlands resulting from activities in the adjacent uplands include: changes in hydrology (e.g., from roads, detention basins, irrigation, increases in impervious surfaces, sand and gravel mining); degradation of water quality (e.g., due to herbicides, pesticides, oil and salt from various sources including roads, agricultural fields, parking lots and residential developments); acceleration of succession (e.g., from fertilizer runoff); and introduction of exotic plants (e.g., due to soil disturbance and roads). This zone acts as a filter and buffer, preventing or minimizing the effects of land-use activities on bog turtles and their habitat. This zone is also likely to include at least a portion of the groundwater recharge/supply area for the wetland.

Activities that should be avoided in this zone due to their potential for adverse effects to bog turtles and their habitat include:

- development (e.g., roads, sewer lines, utility lines, storm water or sedimentation basins, residences, driveways, parking lots, and other structures)
- mining
- herbicide application[2]
- pesticide or fertilizer application
- farming (with the exception of light to moderate grazing - see below)
- certain types of stream-bank stabilization techniques (e.g., rip-rapping)
- delineation of lot lines (e.g., for development, even if the proposed building or structure will not be in the wetland)

Careful evaluation of proposed activities on a case-by-case basis will reveal the manner in which, and degree to which activities in this zone would affect bog turtles and their habitat. Assuming impacts within Zone 1 have been avoided, evaluation of proposed activities within Zone 2 will often require an assessment of anticipated impacts on wetland hydrology, water quality, and habitat continuity.

Activities that are likely to be compatible with bog turtle conservation, but that should be evaluated on a case-by-case basis within this zone include:

- light to moderate grazing
- non-motorized recreational use (e.g., hiking, hunting, fishing)
- mowing or cutting of vegetation

Zone 3

This zone includes upland, wetland, and riparian areas extending either to the geomorphic edge of the drainage basin or at least one-half mile beyond the boundary of Zone 2. Despite the distance from Zone 1, activities in these areas have the potential to adversely affect bog turtles and their habitat. This particularly applies to activities affecting wetlands or streams connected to or contiguous with Zone 1, because these areas may support undocumented occurrences of bog turtles and/or provide travel corridors. In addition, some activities (e.g., roads, groundwater withdrawal, water/stream diversions, mining, impoundments, dams, "pump-and-treat" activities) far beyond Zone 1 have the potential to alter

the hydrology of bog turtle habitat, therefore, another purpose of Zone 3 is to protect the ground and surface water recharge zones for bog turtle wetlands. Where the integrity of Zone 2 has been compromised (e.g., through increases in impervious surfaces, heavy grazing, channelization of stormwater runoff), there is also a higher risk of activities in Zone 3 altering the water chemistry of bog turtle wetlands (e.g., via nutrient loading, sedimentation, and contaminants).

Activities occurring in this zone should be carefully assessed in consultation with the Fish and Wildlife Service and/or appropriate State wildlife agency to determine their potential for adverse effects to bog turtles and their habitat. Prior to conducting activities that may directly or indirectly affect wetlands, bog turtles and/or bog turtle habitat surveys should be conducted in accordance with accepted survey guidelines.

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[1] These guidelines are taken directly from the final "Bog Turtle (*Clemmys muhlenbergii*), Northern Population, Recovery Plan" (dated May 15, 2001).

[2] Except when conducted as part of a bog turtle habitat management plan approved by the Fish and Wildlife Service or State wildlife agency

BOG TURTLE HABITAT (PHASE 1) SURVEY REPORT

(template revised by USFWS on 4/13/2006)

The U.S. Fish and Wildlife Service (Pennsylvania Field Office) developed the following report template to ensure that a sufficient amount of detailed information is consistently submitted for agency review. Phase 1 surveyors are encouraged to use this template to format their reports, to ensure that all necessary information is provided. Revisions to this template are likely, as we continue to receive feedback on its content, structure, and ease of use. Example and explanatory language within this template is italicized. Use the current Bog Turtle Survey Guidelines (revised April 2006) in conjunction with this template.

PROJECT and SITE INFORMATION

This Phase 1 survey was conducted on behalf of:

Name: _____

☐ landowner ☐ developer ☐ state agency ☐ local government

☐ other (_____)

Address: _____

_____

City/State/Zip: _____

Telephone: _____

Project / Property Name: _____

Project / Property Location:

Address: _____

_____

City/State/Zip: _____

Township/Municipality: _____

County: _____

Watershed (minor): _____

Watershed (major): _____

The project location is shown on Figure 1 (_____ USGS 7.5-minute topographic map).

[Include USGS topographic map showing project area location. Identify county, township, and quadrangle name on map, as well as project name.]

Project Area / Property – Size and Extent

[Identify the size/extent of the project area. For example, the project area for a proposed residential development would include all areas that would be affected (directly or indirectly) by all parts of the development, including buildings, roads, driveways, lots in their entirety, utility lines, water and sewer lines, stormwater detention/retention basins, staging and access areas, recreational fields or trails, etc. Often, this includes the entire land parcel, all of which will be either directly or indirectly affected by the project. In some cases, a land parcel is being surveyed, prior to developing project plans. In that case, identify the land parcel (e.g., "the 20-acre David Jones property") as the project area, and explain that project plans have not yet been developed.]

Current Land Use and Setting

[Describe current land use and the overall setting. Also, describe what habitat type(s) are currently in the project area (e.g., "Eighty acres of the 100-acre parcel is in row crops, while the remainder is a woodlot dominated by red maple and green ash that are approximately 40 years old. A stream, approximately 6 inches deep and 2 feet wide crosses through the woodlot. A farmhouse and barn also occur on the property."]

Figure 2 represents a detailed map of the project area or property, showing existing features (including property boundaries, structures, power lines, roads, wetlands, ponds, streams, and major cover types).

[Include a project area map, showing 1) property/parcel boundaries; 2) existing features and general cover types (e.g., roads, power lines, agricultural fields, forest, streams, ponds, houses, spring houses); and 3) all wetlands (numbered consistent with this report). Include photo point references for each wetland.]

Project Description

[Describe the project. Include the project description, including the project purpose, timing, size, duration, etc. If the project is part of a larger undertaking, describe the relationship between the parts. For example, "This project involves the construction of sewer and water lines to connect a proposed 250-unit residential development (located on a 100-acre parcel of land) to the City of Mudville's existing wastewater treatment plant." If the project is more vague, at least describe what is proposed for the property, e.g., "The landowner intends to develop a residential subdivision on the property, but plans have not yet been drawn up."]

Permit Area (for wetland/stream encroachments):

[If it is known at the time of the phase 1 survey that one or more permits will be necessary for wetland and/or stream encroachments, disclose this information. For example, "Although plans have not been finalized, it appears that at least three wetland and two stream crossings will be necessary for road and utility crossings." If no wetland or stream encroachments will be necessary, indicate that as well – if you are sure none will be needed.]

WETLAND INFORMATION

[Include information about all wetlands on the property or in the project area, regardless of whether or not they are "jurisdictional" wetlands, pursuant to Section 404 of the Clean Water Act.]

A wetland investigation was conducted _____ [*identify the extent of the wetland investigation, e.g., "on the entire 220-acre parcel" or "in the 50-foot right-of-way on either side of S.R. 123]. [If some areas were not investigated, explain why. If these areas occur in a location that will be subject to future phases of development, they should be surveyed now. If the entire property/parcel was not investigated, describe exactly what area(s) were investigated, and why.]*

Wetlands were ☐ identified ☐ delineated on _____ [date(s)] by:

Name: _____

Affiliation: _____

Address: _____

_____

City/State/Zip: _____

Telephone: _____

Email: _____

Wetlands were delineated in accordance with _____ *[describe delineation method.] [If a wetland delineation has not been conducted, explain why.]*

All wetlands _____ *[e.g., "in the project area" or "on the 220-acre property" or "in the 50 foot right-of-way"]* were identified and delineated. *[If this is not the case, explain why.]* Wetland information is summarized in Table 1.

Table 1. Wetland Size and Location

Wetland ID	Wetland Size (acres)	Designated Survey Area (acres) [1]	Lat/Long[2]	Is the entire wetland on site?[3]

1 "Designated survey areas" are those areas of the wetland that meet the soils, hydrology and vegetation criteria for potential bog turtle habitat. These areas may occur within the emergent, scrub-shrub or forested parts of the wetland.

2 For smaller wetlands (*e.g.*, up to 3 acres) lat/long should be approximate center of wetland); for larger wetlands, either indicate approximate center or GPS the outer ends of the wetland. Lat/long should be submitted in degrees-minutes-seconds or degree-decimal format. Be sure to indicate the GPS datum (i.e., NAD 27, NAD 83, or WGS 84).

3 Answer "yes" if the entire wetland is located within the property/parcel boundaries or right-of-way. If any part of the wetland extends off-site, or if the entire wetland is off-site (e.g., but close to the parcel boundaries) answer "no" and provide a further explanation in the wetland narrative section.

PHASE 1 SURVEY

[During the Phase 1 Survey, examine all wetlands on the land parcel, or all wetlands that may be directly or indirectly affected by any aspect of the project. Generally, indirect effects should be assumed to extend about 300 feet beyond the project footprint (e.g., sedimentation from earth disturbance, fertilizer and pesticide transport beyond lot boundaries or agricultural fields). However, the hydrological effects of development or construction (e.g., due to roads, wells, stormwater management) may extend well beyond 300 feet from the area of direct impact. See "Bog Turtle Conservation Zones" for further guidance.]

The Phase 1 survey was conducted on _____ [date(s)] by:

Name(s): _____

Affiliation: _____

Address: _____

_____

City/State/Zip: _____

Telephone: _____

Email: _____

A Phase 1 survey of all wetlands located _____ [*identify the extent of the Phase 1 investigation, e.g., "on the entire 220-acre parcel" or "in the 50-foot right-of-way on either side of S.R. 123]* was conducted. *[If some wetlands were not surveyed, explain why. If these wetlands occur in an area(s) that will be subject to future phases of development, they should be surveyed now.]*

A summary of the Phase 1 survey results is included in Table 2. Detailed information about each wetland follows the table. Completed field forms for each wetland are included in Appendix A.

Table 2. Summary of Phase 1 Survey Results

Wetland ID	Wetland Size	Wetland Type & Amount (% or acres)	Extent of "Mucky" Soils[1] (by wetland type)	Survey Effort *(in person-hrs)*	Bog Turtle Habitat?
1	*1.5*	*PEM – 50%* *PSS -- 50%*	*PEM – 80%* *PSS – 50%*	*2*	*YES*

1 "Mucky" is used to describe soils that can be easily penetrated with a probe. For Phase 1 surveys, a 1-inch diameter blunt-ended wooden pole (e.g., broom or tool handle) is used. "Mucky" is NOT used to refer to a specific soil type or soil classification.

Wetland 1

[Include narrative description of wetland. Describe dominant vegetation, degree and distribution of "muckiness", and hydrology. Also describe any disturbance noted (e.g., ditches, fill, grazing).

[Include a map of the wetland, showing the extent of the "designated survey area(s)". Also, a sketch of the distribution of wetland types (e.g., PEM, PSS, PFO, etc.) within the wetland is helpful.]

[List any herps found (or previously found by others).]

[Include photo(s) of wetland. Be sure photos are representative of the wetland type(s) found.]

[If the wetland continues off-site, disclose this information, describe the off-site portion, and indicate the degree to which the off-site portion was inspected.]

Wetland 2

See above for information to include.

Off-site Adjacent Wetlands

[If any wetlands occur off-site (e.g., adjacent to the subject property), and they might be directly or indirectly affected by the proposed project (or any aspects thereof) they should be included in this Phase 1 report. If these wetlands were not surveyed, visual observations from the subject property or from a public road should be reported.]

NOTE: If potential habitat is found and the project proponent chooses to assume bog turtles are present and avoid potential adverse effects to the species (rather than conduct a Phase 2 survey), a detailed project narrative and detailed project plans should be submitted to the Fish and Wildlife Service and Pennsylvania Fish and Boat Commission (along with this Phase 1 Report). The narrative and plans should demonstrate that the project will have no direct or indirect adverse effects to bog turtles or their habitat. See "Bog Turtle Conservation Zones" for further guidance.

Appendix A

[Include a completed "USFWS / PFBC Bog Turtle Habitat Evaluation – Field Form" for each wetland. Also -- make sure the forms are legible.]

Appendix B

[Include information about the person who conducted the Phase 1 survey, including the name, address, telephone number, email address, and qualifications (e.g., "recognized, qualified Phase 2 bog turtle surveyor".]

U.S. FISH AND WILDLIFE SERVICE
Pennsylvania Field Office

QUALIFIED NORTHEASTERN BULRUSH SURVEYORS

The following list includes persons known by the U.S. Fish and Wildlife Service to have the skills and experience to conduct surveys for the northeastern bulrush (*Scirpus ancistrochaetus*). Observations of the northeastern bulrush at previously undocumented sites must be reported in writing to the Service within 48 hours. Northeastern bulrush surveys should be overseen by a qualified surveyor, who will be present in the field at all times during the investigation.

This information is not to be construed as an endorsement of individuals or firms by the Service or any of its employees. Persons not on this list, but who have documented experience in conducting scientific studies of, or successful searches for, the northeastern bulrush may submit their qualifications to the Service for review. The submission must include documentation that the requestor has experience successfully locating and identifying the northeastern bulrush and its habitat. Additions to and deletions from this list are at the sole discretion of the Service. This list is subject to revision at any time without prior notice.

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Revised 03/05/2014

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monarda55@gmail.com

Revised 03/05/2014

U.S. Fish and Wildlife Service

Trust Resources List

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

Pennsylvania Ecological Services Field Office
315 SOUTH ALLEN STREET, SUITE 322
STATE COLLEGE, PA 16801
(814) 234-4090
http://www.fws.gov/northeast/pafo/

Project Name:

10" Lateral

U.S. Fish and Wildlife Service

Trust Resources List

Project Location Map:

Project Counties:

Northampton, PA

U.S. Fish and Wildlife Service

Trust Resources List

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-75.297179 40.6136672, -75.297175 40.6136728, -75.2971693 40.6136767, -75.293494 40.615351, -75.2916 40.616745, -75.2920459 40.6185569, -75.2920462 40.6185654, -75.2920429 40.6185732, -75.2920366 40.618579, -75.2896175 40.6199977, -75.2860784 40.6233515, -75.2837886 40.6278872, -75.2837838 40.6278933, -75.2797912 40.6313558, -75.2793636 40.6330303, -75.2793602 40.6330374, -75.2793544 40.6330426, -75.279347 40.6330452, -75.2793393 40.6330448, -75.2793322 40.6330414, -75.279327 40.6330356, -75.2793244 40.6330282, -75.2793248 40.6330205, -75.279754 40.6313399, -75.2797564 40.6313343, -75.2797603 40.6313297, -75.2837546 40.6278657, -75.2860442 40.6233304, -75.2860483 40.6233249, -75.2895916 40.6199671, -75.2895953 40.6199643, -75.2920035 40.618552, -75.291558 40.6167416, -75.2915576 40.6167338, -75.2915603 40.6167265, -75.2915655 40.6167207, -75.2934719 40.6153176, -75.2934755 40.6153155, -75.2971461 40.6136433, -75.2997873 40.6081598, -75.299792 40.6081536, -75.2997987 40.6081496, -75.2998064 40.6081485, -75.299814 40.6081505, -75.2998202 40.6081552, -75.2998242 40.6081619, -75.2998253 40.6081696, -75.2998233 40.6081772, -75.297179 40.6136672)))

Project Type:

Oil Or Gas

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **2** threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section below for critical habitat that lies within your project area. Please contact the designated FWS office if you have questions.

Species that should be considered in an effects analysis for your project:

Mammals	Status		Has Critical Habitat	Contact
Indiana bat (*Myotis sodalis*) Population: Entire	Endangered	species info		Pennsylvania Ecological Services Field Office
Reptiles				
Bog Turtle (*Clemmys muhlenbergii*) Population: northern	Threatened	species info		Pennsylvania Ecological Services Field Office

U.S. Fish and Wildlife Service

Trust Resources List

Critical habitats within your project area:

There are no critical habitats within your project area.

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. For more information regarding these Acts see: http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html.

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tool links in the Bird Conservation Tools section at: http://www.fws.gov/migratorybirds/CCMB2.htm.

For information about conservation measures that help avoid or minimize impacts to birds, please visit:
http://www.fws.gov/migratorybirds/CCMB2.htm.

Migratory birds of concern that may be affected by your project:

U.S. Fish and Wildlife Service

Trust Resources List

There are **19** birds on your Migratory birds of concern list. The underlying data layers used to generate the migratory bird list of concern will continue to be updated regularly as new and better information is obtained. User feedback is one method of identifying any needed improvements. Therefore, users are encouraged to submit comments about any questions regarding species ranges (e.g., a bird on the USFWS BCC list you know does not occur in the specified location appears on the list, or a BCC species that you know does occur there is not appearing on the list). Comments should be sent to the ECOS Help Desk.

Species Name	Bird of Conservation Concern (BCC)	Species Profile	Seasonal Occurrence in Project Area
American bittern (*Botaurus lentiginosus*)	Yes	species info	Breeding
Bald eagle (*Haliaeetus leucocephalus*)	Yes	species info	Year-round
Black-billed Cuckoo (*Coccyzus erythropthalmus*)	Yes	species info	Breeding
Blue-winged Warbler (*Vermivora pinus*)	Yes	species info	Breeding
Canada Warbler (*Wilsonia canadensis*)	Yes	species info	Breeding
cerulean warbler (*Dendroica cerulea*)	Yes	species info	Breeding
Fox Sparrow (*Passerella liaca*)	Yes	species info	Wintering
Golden-Winged Warbler (*Vermivora chrysoptera*)	Yes	species info	Breeding
Kentucky Warbler (*Oporornis formosus*)	Yes	species info	Breeding
Louisiana Waterthrush (*Parkesia motacilla*)	Yes	species info	Breeding
Pied-billed Grebe (*Podilymbus podiceps*)	Yes	species info	Year-round
Prairie Warbler (*Dendroica discolor*)	Yes	species info	Breeding
Purple Sandpiper (*Calidris maritima*)	Yes	species info	Wintering
Red Knot (*Calidris canutus rufa*)	Yes	species info	Wintering
Red-headed Woodpecker (*Melanerpes erythrocephalus*)	Yes	species info	Breeding

Rusty Blackbird (*Euphagus carolinus*)	Yes	species info	Wintering
Short-eared Owl (*Asio flammeus*)	Yes	species info	Wintering
Wood Thrush (*Hylocichla mustelina*)	Yes	species info	Breeding
Worm eating Warbler (*Helmitheros vermivorum*)	Yes	species info	Breeding

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

Data Limitations, Exclusions and Precautions
The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Exclusions - Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include

seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Precautions - Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC is unable to display wetland information at this time.