

Riparian Buffer Waiver Request

The PennEast Pipeline Project (Project) will cross riparian buffers regulated under 25 PA Code Chapter 102. Specifically in §102.14, protection of mandatory riparian buffers is required within 150 feet of perennial and intermittent watercourses located within Exceptional Value (EV) and High Quality (HQ) watersheds or in EV/HQ watersheds where there are waters failing to attain one or more designated uses as listed in Category 4 or 5 of Pennsylvania's Integrated Water Quality Monitoring and Assessment Report.

PennEast Pipeline Company, LLC (PennEast) identified, located, classified and delineated watercourse resources within and adjacent to the Project area through field surveys conducted from 2014 to 2018. The survey corridor was generally 400 feet wide, centered on the proposed pipeline centerline. In locations where PennEast was unable to survey within 150 feet of the edge of workspace due to lack of access, the U.S. Geologic Survey (USGS) National Hydrology Database (NHD) was used to supplement the field-delineated watercourse boundaries to provide full coverage of watercourses within 150 feet of the proposed workspace. Riparian buffers were established on each side of the watercourses. In HQ and EV watersheds, the riparian buffer extends 150 feet from the watercourse top of bank. In other watersheds, PennEast assumed the riparian buffer extends 100 feet from the watercourse top of bank. Riparian buffers are shown on the Erosion and Sediment Control Plan (E&SCP) drawings (ESCGP-3 Section 2).

Pipeline Right-of-Way

Given the linear nature of the proposed Project, temporary impacts within riparian buffers are unavoidable. Wherever site conditions would allow, PennEast reduced the construction right-of-way (ROW) to 75 feet through wetlands, watercourses, floodways, and forested riparian buffers. In some areas, the workspace could not be reduced without jeopardizing safety. These include areas of steep terrain, areas adjacent to road crossings and other existing infrastructure, and/or where specialized construction techniques require expanded workspace for safe construction. Trenchless crossing methods will also be used to cross under several watercourses and sensitive resources, and workspace has been sited outside of riparian areas wherever practicable to avoid riparian impacts.

Where riparian impacts could not be avoided, PennEast will implement the best management practices (BMPs) detailed in the E&SCP (ESCGP-3 Section 2), Site Restoration Plan (ESCGP-3 Section 3), and Wetland and Riparian Reforestation Plan (JPA Section L-4A) to further minimize impacts. PennEast will employ multiple measures to reduce the extent and duration of Project impacts to riparian communities which include, but are not limited to the following:

- Stump removal in wetlands and along watercourses will be limited to the trench line and what is necessary to safely install the equipment crossings. This BMP will stabilize the soil surface within the limits of disturbance (LOD) and will promote natural regeneration (stump sprouting) of several tree and shrub species.
- Following construction, all areas of workspace will be returned to their original contours and reseeded or replanted.

- Erosion control blanket will be placed on disturbed areas within 50 feet of streams and on slopes steeper than 3H:1V. In HQ/EV watersheds, erosion control blanket will be placed on disturbed areas within 100 feet of streams.
- A riparian conservation seed mix will be used to restore riparian buffers within 150 feet of HQ/EV watercourses and within 100 feet of other watercourses. This seed mix will be used to revegetate the entire LOD in riparian areas where slopes are less than 10%. Tree and shrub plantings will also occur in forested riparian buffers, where workspace outside of the 30-foot maintained ROW will be planted.
- Only the 30-foot permanent ROW will be mowed and maintained as an herbaceous or shrubby habitat. A ten-foot wide corridor centered on the pipe will be mowed annually to maintain herbaceous cover.

PennEast respectfully requests riparian buffer waivers for impacts along the pipeline ROW in accordance with 25 PA Code §102.14(d)(2)(ii).

Aboveground Facilities

With the exception of the Kidder Compressor Station and the Blue Mountain Interconnect, all other aboveground facilities have been sited outside of riparian buffers.

Kidder Compressor Station

The permanent access road associated with the Kidder Compressor Station will cross a forested riparian buffer of an unnamed tributary (UNT) to Black Creek (HQ-CWF). PennEast evaluated alternative sites, factoring impacts to wetlands, watercourses, and riparian areas as well as impacts to surrounding communities in the site selection. The proposed compressor station site location was selected primarily based on its increased distance from nearby commercial and residential properties and the proximity to Interstate-80, which is an existing noise source, thereby minimizing noise impacts to noise sensitive areas near the compressor station. Compared to an alternative site, a greater forested buffer will remain between the station and the surrounding community. The site is also zoned as light industrial and has received conditional approval from the Kidder Township Zoning Hearing Board and Planning Commission. PennEast sited the proposed station to avoid riparian impacts to the extent practicable; however, because the site is located between Interstate-80 and the UNT to Black Creek, there are no feasible, alternative methods to access the site without crossing the watercourse and its riparian buffer. The proposed crossing location, where a permanent box culvert will be installed, was sited to avoid wetland impacts and minimize watercourse and riparian buffer impacts to the greatest extent practicable. Per 25 PA Code §102.14(f)(2)(i), construction of roads within a riparian buffer is an allowable activity when authorized by the Pennsylvania Department of Environmental Protection (PADEP). PennEast respectfully requests authorization for this forested riparian buffer impact.

Approximately 0.32 acres of forested riparian buffer associated with an UNT to Black Creek will also be impacted to construct the Kidder Compressor Station. This workspace is needed to install three blowdown silencers and a fence. As described above, PennEast designed the site to avoid and minimize impacts to wetlands, watercourses, and riparian buffers to the greatest extent practicable. Due to the constraints imposed by the wetlands and watercourses surrounding the site and the land development requirements to construct the facility, impacts to this forested riparian buffer could not be avoided. PennEast respectfully requests a riparian buffer waiver for this in accordance with 25 PA Code §102.14(d)(2)(vi).

Blue Mountain Interconnect

The Blue Mountain Interconnect will impact the forested riparian buffer of an UNT to Aquashicola Creek (HQ-CWF). PennEast evaluated several site alternatives for the Blue Mountain Interconnect, factoring impacts to wetlands, watercourses, riparian buffers, protected species, forests, and the Blue Mountain Ski Resort in the site selection process. Due to the increased environmental impacts, and through discussions with UGI Utilities, Blue Mountain Ski Resort, and the private landowner, PennEast determined that the option located on Blue Mountain Ski Resort is the preferred option. Once the facility is built, this option provides the flexibility for utility distribution lines, which can be built in either direction within the ski resort to accommodate its potential expansion opportunities, and has fewer environmental and landowner impacts, both permanently and during construction. The site also remains on the property owner that the gas will service, at a location that will have the least amount of impact to Blue Mountain Ski Resort's existing operations and planned future expansion.

The riparian buffer that would be impacted during construction and operation of the facility abuts two watercourses. One watercourse (041017_GM_1001_P_MI) is an approximately 4-foot wide perennial stream that flows through a culvert under an existing dirt/gravel road (Figure 1). On the north side of the access road, the stream flows through approximately 275 feet of flexible 8-inch diameter plastic culvert that lies on the soil surface (Figure 2). The second watercourse (041117_GM_1002_E_MI) is an approximately 3-foot wide headwater channel that flows into watercourse 041017_GM_1001_P_MI (Figure 3).

Figure 1. Perennial watercourse 041017_GM_1001_P_MI flows through a culvert under an existing dirt/gravel access road. (View facing southwest)



Figure 2. Perennial watercourse 041017_GM_1001_P_MI flows through approximately 275 feet of 8-inch diameter flexible pipe culvert on the north side of the access road. (View facing north)



Figure 3. Headwater channel 041117_GM_1002_E_MI flows into 041017_GM_1001_P_MI. (View facing north)



PennEast designed the Blue Mountain Interconnect to minimize impacts to the riparian buffers. The proposed facility initially impacted the riparian buffer, but after delineations were complete, PennEast moved the facility to the west, closer to the proposed stormwater system to reduce forested riparian impacts. Due to topographic constraints, an existing access road, and future Blue Mountain Ski Resort plans, the site could not be moved completely out of the riparian buffer. Approximately 0.52 acres of riparian buffer will be impacted to construct the facility, of which approximately 0.20 acres lies within the permanent Blue Mountain Interconnect easement. Within the facility's temporary and permanent easements, PennEast proposes to plant trees and shrubs within the temporary workspace and within the permanent easement to the extent practicable. However, to maintain the integrity of the station piping, PennEast would maintain a 30-foot wide tree-free corridor over the pipeline within the station. Additionally, an approximately 0.01 acre area of riparian buffer that abuts a post-construction stormwater management facility (a swale) will not be replanted. The total acreage of forest conversion associated with the Blue Mountain Interconnect is 0.13 acre. PennEast respectfully requests a riparian buffer waiver for this in accordance with 25 PA Code §102.14(d)(2)(vi).

Access Roads

PennEast will primarily use existing and partially-existing access roads to access the construction ROW. Several existing roads that will be used to construct the Project cross riparian areas; however, no improvements aside from general maintenance activities are proposed. Maintenance activities may include tree branch clearing, gravel placement, minor grading, lengthening, or widening. These activities are exceptions to mandatory riparian buffer requirements per 25 PA Code §102.14(d)(1)(v).

No existing forested riparian buffers will be impacted by access roads with the exception of the access road associated with the Kidder Compressor Station, which is described in Aboveground Facilities above.

Project Summary

PennEast Pipeline Company, LLC respectfully requests 92 riparian buffer waivers in accordance with 25 PA Code §102.14(d)(2)(ii) for linear project impacts, 4 riparian buffer waivers in accordance with 25 PA Code §102.14(d)(2)(vi) for minor impacts at aboveground facilities due to site characteristics, and approval of one riparian buffer impact as an allowable activity under 25 PA Code 102(f)(2)(i). Impacts within each county are described below. Table 11 lists the proposed acreage of earth disturbance within each mandatory riparian buffer that will be impacted by the Project. The existing land use cover types within each riparian buffer are categorized. For forested riparian buffers where reforestation is proposed, the acreage of the proposed reforestation area is provided.

County-Specific Summaries

Bucks County

In Bucks County, the Project does not cross any mandatory riparian buffers in accordance with 25 PA Code §102.14(a); therefore, no waiver is requested in Bucks County.

Carbon County

The Project's pipeline ROW crosses the forested riparian buffers of 43 watercourses designated as EV or HQ in Carbon County. The Project does not cross any impaired EV or HQ watercourses in Carbon County. Table 1 provides details on the EV/HQ watercourses for which waivers are being requested. PennEast respectfully requests riparian buffer waivers for these 43 utility line crossings in accordance with 25 PA Code §102.14(d)(2)(ii).

Additionally in Carbon County, PennEast proposes riparian buffers associated with two above-ground facilities, the Kidder Compressor Station and Blue Mountain Interconnect, as discussed above.

Luzerne County

The Project's pipeline ROW crosses the forested riparian buffers of 20 watercourses designated as EV or HQ in Luzerne County. The Project does not cross any impaired EV or HQ watercourses in Luzerne County. Table 1 provides details on the EV/HQ watercourses for which waivers are being requested. PennEast respectfully requests riparian buffer waivers for these 20 utility line crossings in accordance with 25 PA Code §102.14(d)(2)(ii).

Monroe County

Although the Project does not impact any watercourses within Monroe County, PennEast delineated watercourses within the Project's study corridor in Monroe County. Two riparian buffers associated with the HQ watercourses that are adjacent to the workspace will be temporarily disturbed by Project construction. Table 1 provides details on the EV/HQ riparian buffers for which waivers are being requested. PennEast respectfully requests riparian buffer waivers for these two utility line crossings in accordance with 25 PA Code §102.14(d)(2)(ii).

Northampton County

The Project's pipeline ROW crosses the forested riparian buffers of 27 watercourses designated as EV, HQ, and/or impaired in Northampton County. Table 1 provides details on the EV/HQ and impaired watercourses for which waivers are being requested. PennEast respectfully requests riparian buffer waivers for these 27 utility line crossings in accordance with 25 PA Code §102.14(d)(2)(ii).

Table 1: Riparian Buffers Impacted by the Project

MP ¹	Watercourse ID ²	PA Code Designated or Existing Use ³	Impairment	Land Use	Delineated Riparian Buffer Acreage within LOD (acres)	Acreage of Riparian Buffer to be Reforested (acres)
<i>Luzerne County</i>						
PennEast Mainline Pipeline						
14.7	041017_NJ_1002_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.92	0.55
15	043015_JC_1001_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.52	0.25
16.2	112114_JC_1002_P_MI	HQ-CWF, MF	-	Forest, Open Land	0.51	0.30
16.2	112114_JC_1003_P_IM	HQ-CWF, MF	-	Forest, Open Land, Waterbodies	0.78	0.14
16.4	112114_JC_1001_P_MI	HQ-CWF, MF	-	Forest, Open Land, Waterbodies	0.90	0.31
16.7	112014_JC_1003_P_IM	HQ-CWF, MF	-	Forest, Open Land	1.11	0.66
16.9	112014_JC_1002_P_MI	HQ-CWF, MF	-	Forest, Open Land	0.68	0.34
17.7	112014_JC_1001_P_MI	HQ-CWF, MF	-	Forest, Residential	0.54	0.10
18.3	111914_JC_1002_P_IM	HQ-CWF, MF	-	Forest, Waterbodies	0.52	0.31
18.4	111914_JC_1001_P_IM	HQ-CWF, MF	-	Forest	0.26	0.16
19.1	121814_JC_1014_I_MI	HQ-CWF, MF	-	Forest	0.87	0.60
19.6	121614_JC_1009_P_IM	HQ-CWF, MF	-	Forest	0.87	0.52
19.7	121614_JC_1009_P_MI	HQ-CWF, MF	-	Forest	0.33	0.14
20	121614_JC_1007_P_MI	HQ-CWF, MF	-	Forest	0.57	0.34
20.1	121614_JC_1006_P_MI	HQ-CWF, MF	-	Forest	0.86	0.53
20.7	121614_JC_1005_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.63	0.40
21.2	121614_JC_1004_I_MI	HQ-CWF, MF	-	Forest	0.54	0.32
22.4	042017_MK_1002_P_MI	HQ-CWF, MF	-	Forest, Open Land	0.43	0.17
22.7	050615_JC_1001_P_IM	HQ-CWF, MF	-	Forest, Waterbodies	0.63	0.40
22.7	102115_WA_001_I_MI	HQ-CWF, MF	-	Forest	0.21	0.11
<i>Carbon County</i>						

MP ¹	Watercourse ID ²	PA Code Designated or Existing Use ³	Impairment	Land Use	Delineated Riparian Buffer Acreage within LOD (acres)	Acreage of Riparian Buffer to be Reforested (acres)
PennEast Mainline Pipeline						
23.1	052115_JC_1001_P_MA	HQ-CWF, MF	-	Forest	1.16	0.39
24.5	110415_GM_1001_I_MI	HQ-CWF, MF	-	Forest	0.63	0.42
26.5	102114_JC_1002_P_MI	HQ-CWF, MF	-	Forest	0.29	0.10
26.6	102114_JC_1001_P_MI	HQ-CWF, MF	-	Forest, Waterbodies	1.74	1.26
27.4R2	102314_JC_1001_P_MI	HQ-CWF, MF	-	Forest	0.41	0.29
31.1R2	042415_JC_1003_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.29	-
31.1R2	042415_JC_1005_D_MI	HQ-CWF, MF	-	Forest	0.01	-
31.2R2	042415_JC_1002_P_IN	HQ-CWF, MF	-	Forest, Open Land	0.80	-
31.2R2	042415_JC_1004_P_MI	HQ-CWF, MF	-	Forest	0.03	-
31.3R2	042415_JC_1001_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.02	-
32.6R3	110316_GM_1002_I_MI	HQ-CWF, MF	-	Forest	0.39	0.23
32.7R3	110316_GM_1001_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.49	0.30
32.8R3	110316_GM_1003_I_MI	HQ-CWF, MF	-	Forest, Open Land, Roadways	0.87	0.46
32.9R3	110316_GM_1004_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.64	0.38
33.2R3	042115_JC_1001_P_IN	HQ-CWF, MF	-	Forest, Open Land	0.52	0.29
33.3R3	042115_JC_1002_P_MI	HQ-CWF, MF	-	Forest, Open Land	0.10	0.05
33.5R3	042115_JC_1004_I_MI	HQ-CWF, MF	-	Forest, Open Land	2.02	1.30
33.7R3	042115_JC_1006_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.96	0.35
34.6R2	042315_JC_1001_I_MI	EV, MF	-	Forest, Open Land, Roadways	1.19	0.02
34.7R2	042315_JC_1002_P_MI	EV, MF	-	Forest, Open Land	0.59	0.12
34.8	042315_JC_1003_I_IN	EV, MF	-	Forest, Open Land, Residential	1.14	0.62
34.8R3	042315_JC_1003_P_IN	EV, MF	-	Forest, Open Land, Residential	0.58	0.25

MP ¹	Watercourse ID ²	PA Code Designated or Existing Use ³	Impairment	Land Use	Delineated Riparian Buffer Acreage within LOD (acres)	Acreage of Riparian Buffer to be Reforested (acres)
36.1	060117_MB_1001_P_MI	EV, MF	-	Forest, Open Land	0.74	0.12
36.5R3	050615_JC_1002_I_MI	EV, MF	-	Forest, Open Land	0.51	0.11
36.6R3	010816_DB_1001_I_MI	EV, MF	-	Forest, Open Land	2.05	0.26
37.4	061615_DB_1001_I_MI	EV, MF	-	Forest, Open Land	0.70	0.31
38.3	061615_DB_1002_P_IN	EV, MF	-	Forest, Open Land, Roadways	0.54	0.23
41.1	040517_BT_1002_I_MI	EV, MF	-	Forest	0.00	0.00
41.2	012717_GM_1002_P_MI	EV, MF	-	Forest	0.68	0.34
41.2	012717_GM_1003_P_MI	EV, MF	-	Forest, Waterbodies	0.64	0.38
41.3	020117_GM_1002_P_MI	EV, MF	-	Forest, Waterbodies	0.56	0.33
41.6	020117_GM_1001_P_MI	EV, MF	-	Forest, Waterbodies	0.54	0.32
44.7R2	041018_WA_1000_P_MI	HQ-CWF, MF	-	Agricultural, Forest, Open Land, Residential, Roadways	1.51	0.82
45R2	051115_JC_1002_P_MI	HQ-CWF, MF	-	Forest, Open Land, Residential, Roadways	0.99	0.17
45.5	051115_JC_1001_P_MI	HQ-CWF, MF	-	Forest, Roadways	1.07	0.70
46.1	041018_WA_1002_I_MI	HQ-CWF, MF	-	Agricultural, Forest, Open Land	0.69	0.00
46.3	041018_WA_1003_I_MI	HQ-CWF, MF	-	Agricultural, Open Land	0.84	-
49.2R3	033018_WA_1003_P_MI	HQ-CWF, MF	-	Agricultural, Forest	0.37	0.02
49.3R3	041217_GM_1001_P_IN	HQ-CWF, MF	-	Forest	0.38	-
50.6R3	072618_WA_1005_I_MI	HQ-CWF, MF	-	Forest	0.05	0.03
50.6R3	072618_WA_1007_I_MI	HQ-CWF, MF	-	Forest	0.59	0.27
50.6R3	072618_WA_1008_I_MI	HQ-CWF, MF	-	Forest, Open Land	0.32	0.18
50.7R3	072618_WA_1001_P_MI	HQ-CWF, MF	-	Forest, Roadways	0.53	0.32

Kidder Compressor Station

MP ¹	Watercourse ID ²	PA Code Designated or Existing Use ³	Impairment	Land Use	Delineated Riparian Buffer Acreage within LOD (acres)	Acreage of Riparian Buffer to be Reforested (acres)
26.6	082515_BT_1001_P_IM	HQ-CWF, MF	-	Forest, Waterbodies	0.91	-
26.7	112514_JC_1001_I_MI	HQ-CWF, MF	-	Forest	0.32	0.32
Blue Mountain Interconnect						
0.5R3	041017_GM_1001_P_IN	HQ-CWF, MF	-	Forest	0.21	0.12
0.5R3	041017_GM_1001_P_MI	HQ-CWF, MF	-	Forest	0.30	0.26
0.51R3	041117_GM_1002_E_MI	HQ-CWF, MF	-	Forest	0.01	0.01
Blue Mountain Lateral						
0.5R3	041017_GM_1001_P_IN	HQ-CWF, MF	-	Forest, Open Land	0.55	0.36
<i>Monroe County</i>						
PennEast Mainline Pipeline						
50.7R3	072618_WA_1000_I_MI	HQ-CWF, MF	-	Forest, Roadways	0.28	0.19
50.7R3	072618_WA_1006_I_MI	HQ-CWF, MF	-	Forest, Roadways	0.20	0.13
<i>Northampton County</i>						
PennEast Mainline Pipeline						
58R2	071917_MB_1001_I_MI	HQ-CWF, MF	-	Agricultural, Forest	0.84	0.08
58.5	052218_WA_1002_P_MI	HQ-CWF, MF	-	Agricultural, Forest, Waterbodies	0.98	0.37
58.5	052218_WA_1003_P_MI	HQ-CWF, MF	-	Forest	0.08	0.08
59.2	090414_DB_1012_I_MI	HQ-CWF, MF	-	Forest, Roadways	0.20	0.15
59.3	090414_DB_1013_I_MI	HQ-CWF, MF	-	Forest	0.82	0.50
59.7R2	121916_LZ_1001_P_MI	HQ-CWF, MF	-	Forest	0.06	0.06
60.3	051215_JC_1005_P_IN	HQ-CWF, MF	Source Unknown - Pathogens	Agricultural, Forest, Roadways, Waterbodies	0.92	0.24
60.7	090314_DB_1006_I_MI	HQ-CWF, MF	-	Agricultural, Forest	0.91	0.60

MP ¹	Watercourse ID ²	PA Code Designated or Existing Use ³	Impairment	Land Use	Delineated Riparian Buffer Acreage within LOD (acres)	Acreage of Riparian Buffer to be Reforested (acres)
61.4	111214_JC_1004_P_IM	HQ-CWF, MF	Crop Related Agriculture - Siltation	Agricultural, Forest, Residential, Roadways, Waterbodies	1.36	0.25
62.4R3	102715_WA_1002_P_MI	HQ-CWF, MF	-	Commercial/Industrial, Forest, Residential	0.77	0.07
62.8R3	051415_JC_1001_I_MI	HQ-CWF, MF	-	Agricultural, Commercial/Industrial, Forest, Open Land, Roadways	1.64	0.03
63.5	051415_JC_1002_P_IN	HQ-CWF, MF	-	Agricultural, Forest, Waterbodies	0.78	0.16
73.2	031716_NJ_1002_I_MI	HQ-CWF, MF	-	Forest	0.05	0.04
73.2	031716_NJ_1003_P_MI	HQ-CWF, MF	-	Agricultural, Forest	0.14	0.12
73.6R2	042117_GM_1001_P_MI	HQ-CWF, MF	-	Forest	0.55	0.27
73.6R2	042117_GM_1003_P_MI	HQ-CWF, MF	-	Forest	0.34	0.15
73.7R2	042418_WA_1002_I_MI	HQ-CWF, MF	-	Forest	0.15	0.04
73.7R2	042418_WA_1004_P_MI	HQ-CWF, MF	-	Forest	0.83	0.52
73.7R2	042418_WA_1005_P_MI	HQ-CWF, MF	-	Forest	0.07	0.05
74.6	091814_MK_1009_P_IM	HQ-CWF, MF	Source Unknown - Pathogens	Agricultural, Forest	0.88	0.11
74.8	062415_BT_1001_P_MI	HQ-CWF, MF	-	Agricultural, Forest, Open Land, Roadways	2.11	0.44
75.1	122016_LZ_1001_P_MI	HQ-CWF, MF	-	Agricultural, Open Land	0.74	-
75.2	042418_WA_1000_P_MI	HQ-CWF, MF	-	Agricultural	0.19	-
75.2	042418_WA_1001_I_MI	HQ-CWF, MF	-	Agricultural	0.21	-
75.3	122016_LZ_1002_I_MI	HQ-CWF, MF	-	Agricultural	0.13	-
75.7	111314_JC_1002_I_MI	EV, MF	-	Forest, Open Land	0.72	0.42

MP ¹	Watercourse ID ²	PA Code Designated or Existing Use ³	Impairment	Land Use	Delineated Riparian Buffer Acreage within LOD (acres)	Acreage of Riparian Buffer to be Reforested (acres)
75.8	111314_JC_1001_I_MI	EV, MF	-	Forest	0.42	0.30

Notes:

1. All route deviations implemented after the FERC Certificate Application are denoted with an "R" and indicate a MP equation. MPs with an "R1" indicate route deviations implemented and provided to FERC prior to the issuance of the DEIS. MPs with an "R2" indicate route deviations implemented as part of the September 2016 Route Update. MPs with an "R3" indicate route deviations implemented post-FERC Certificate issuance. All MPs without an "R" indicate that the route has not changed since the Certificate Application.
2. In instances where a watercourse is crossed by the proposed pipeline or workspace multiple times, crossing numbers (e.g. "-1", "-2") have been added to the Watercourse ID.
Watercourse ID Key: P = perennial, I = intermittent, E = ephemeral, MA = major, IN = intermediate, MI = minor, C = canal, D = ditch
3. Sources: PADEP Streams Chapter 93 Existing Use, dated 7/2017 and PADEP Streams Chapter 93 Designated Use, dated 2/2017. If a stream has an existing use, the designated use has been replaced with that value. Available at www.pasda.psu.edu.