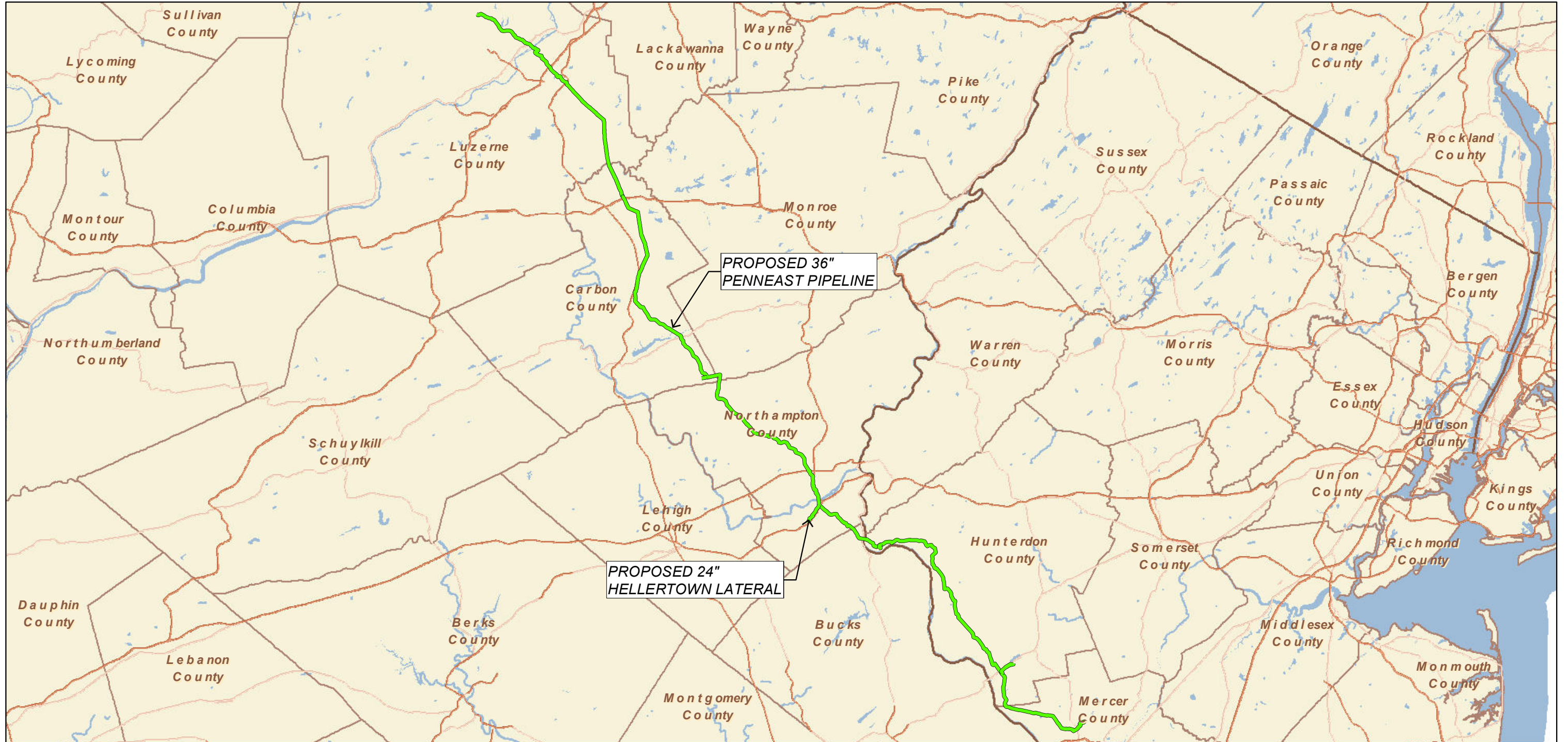


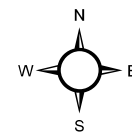


PENNEAST PIPELINE COMPANY LLC
PENNEAST PIPELINE



Legend

- Proposed Route
 Counties
-  Major Highways
  States
- Highways
 States




Coordinate System: UTM83-18F
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

Prepared for:



Prepared by:



									PennEast Pipeline Project	
									Cover Sheet PennEast Pipeline Wetland and Riparian Reforestation Plan	
									Project Mapping	
									1 inch = 10 miles	
NO.	DATE	REVISIONS			BY	CHK	APP	APP	10/10/2019	



Legend

Index Map Extent Municipality Boundary County Boundary

Reference:
esri Streets



PennEast Pipeline Company, LLC



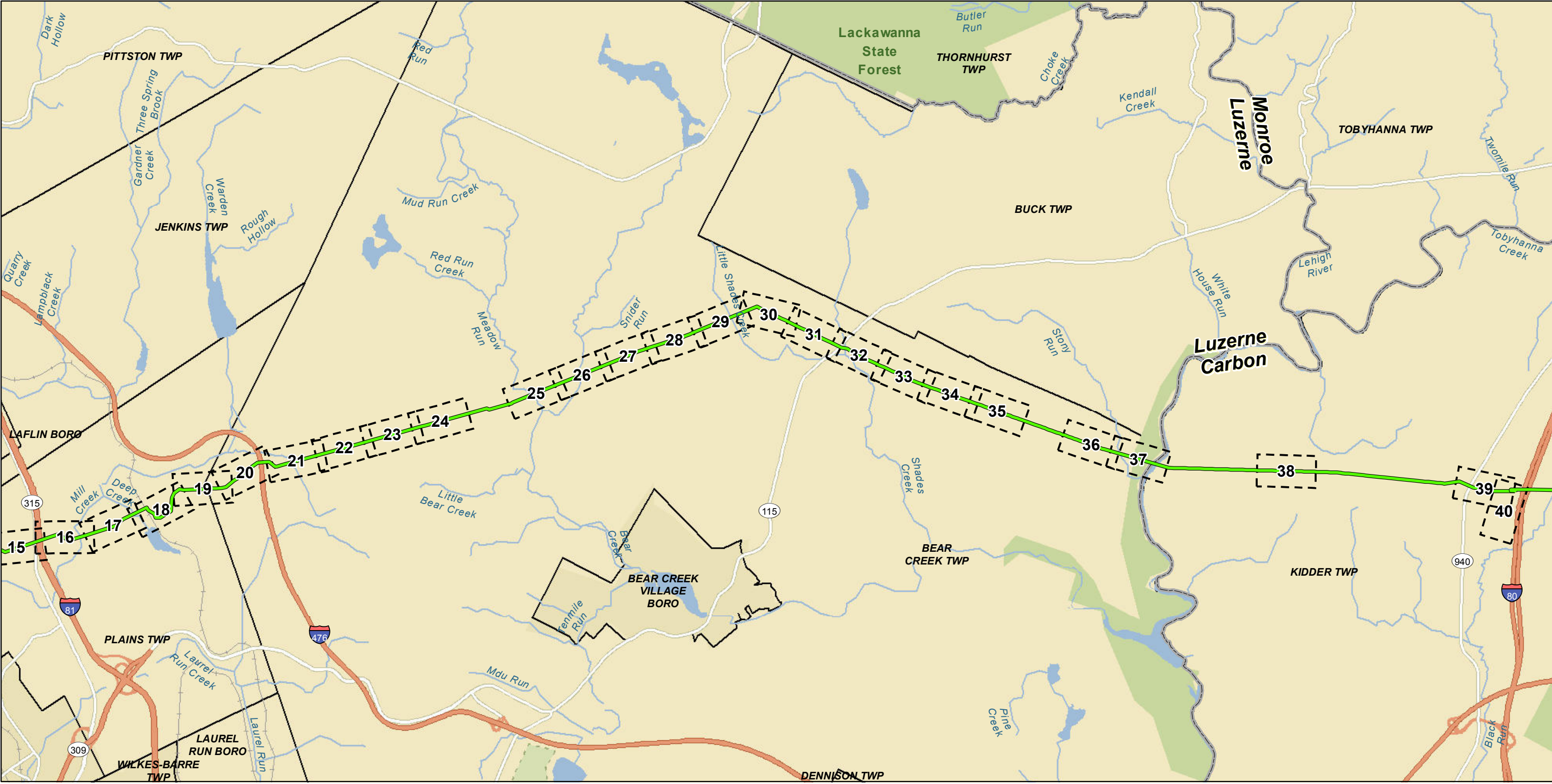
0 0.5 1 2 Miles

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale



TITLE: Figure 2 - Sheet 1 of 6 PennEast Pipeline Project Wetland and Riparian Reforestation Map - Pennsylvania Index Sheets			
LOC: Luzerne County (main county in view)			REV.:
CKD. BY: SB	ENG.:	Date: 10/10/2019	W.O.:
DRN. BY: CDW	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 1 of 6



Legend

Index Map Extent

Municipality Boundary

County Boundary

Reference:
esri Streets

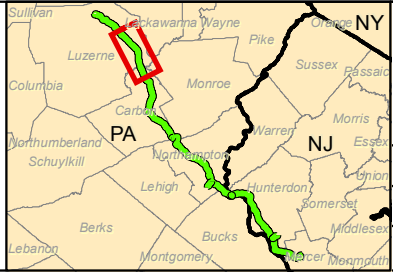
PennEast
PIPELINE

PennEast Pipeline Company, LLC

00.512Miles

Key Map Not Drawn to Scale

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)



TITLE:
Figure 2 - Sheet 2 of 6
PennEast Pipeline Project
Wetland and Riparian Reforestation Map - Pennsylvania Index Sheets

LOC: Luzerne County (main county in view)

CKD. BY: SB

ENG.:

Date: 10/10/2019

W.O.:

DRN. BY: CDW

SCALE: See Graphic Scale

DWG. NO.:

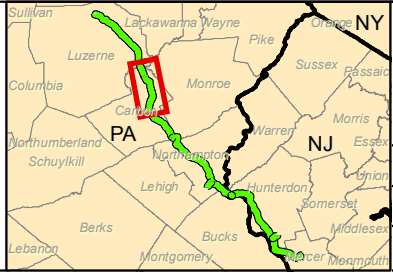
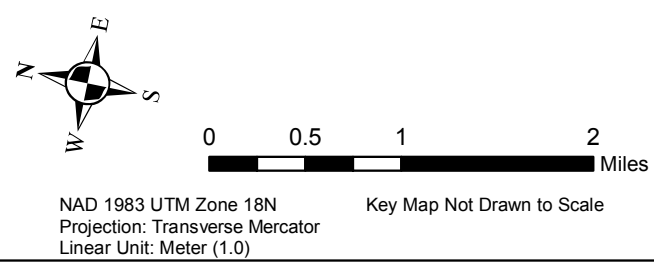
SHEET: 2 of 6



Legend

Index Map Extent Municipality Boundary County Boundary

Reference:
esri Streets



TITLE: Figure 2 - Sheet 3 of 6 PennEast Pipeline Project Wetland and Riparian Reforestation Map - Pennsylvania Index Sheets			
LOC: Carbon County (main county in view)			REV.:
CKD. BY: SB	ENG.:	Date: 10/10/2019	W.O.:
DRN. BY: CDW	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 3 of 6



Legend

Index Map Extent

Municipality Boundary

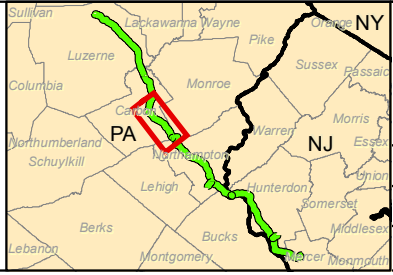
County Boundary

Reference:
esri Streets

PennEast Pipeline Company, LLC

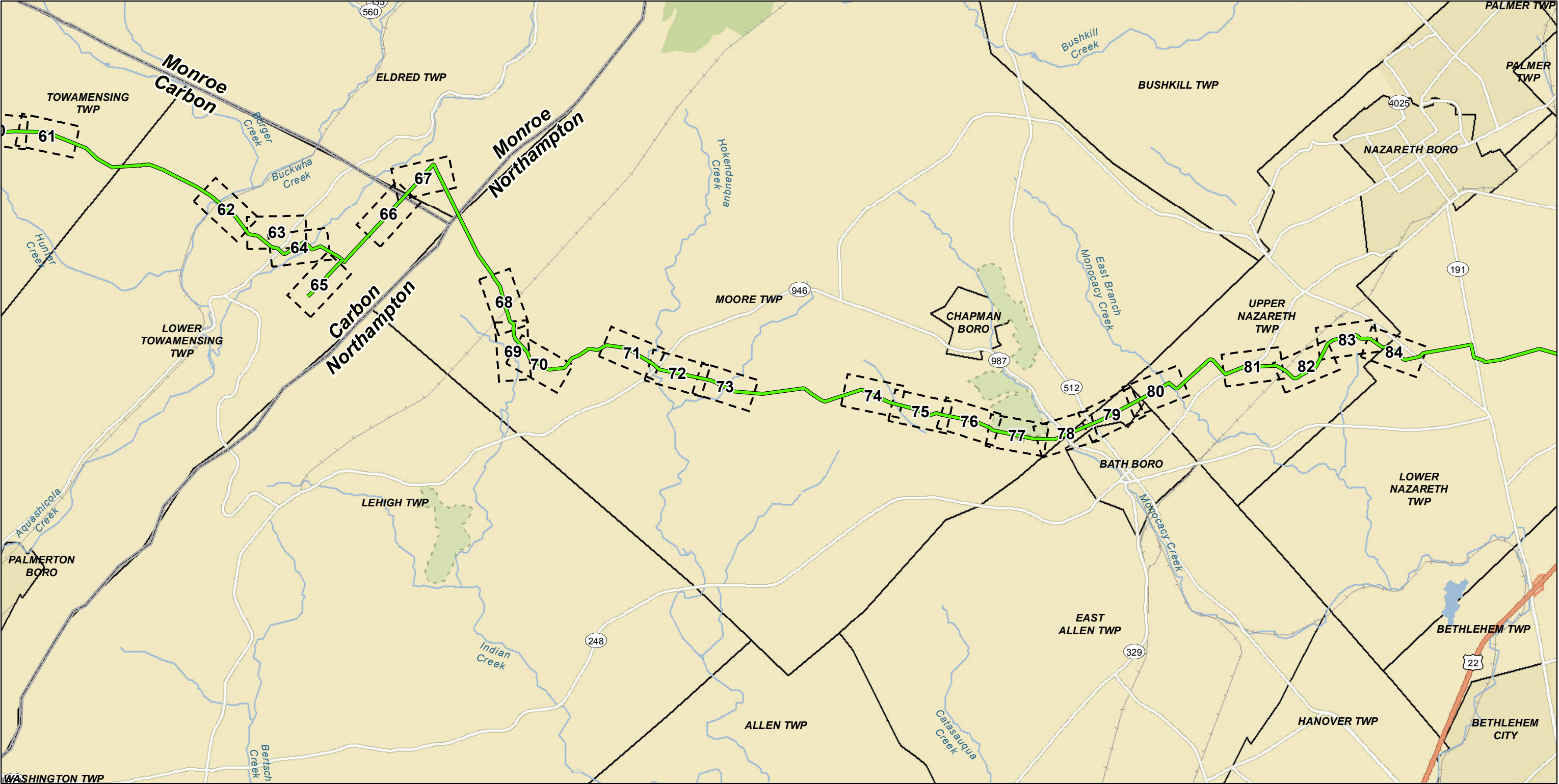
NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale



TITLE:
Figure 2 - Sheet 4 of 6
PennEast Pipeline Project
Wetland and Riparian Reforestation Map - Pennsylvania Index Sheets

LOC: Carbon County (main county in view)			REV.:
CKD. BY: SB	ENG.:	Date: 10/10/2019	W.O.:
DRN. BY: CDW	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 4 of 6



Legend

Index Map Extent

Municipality Boundary

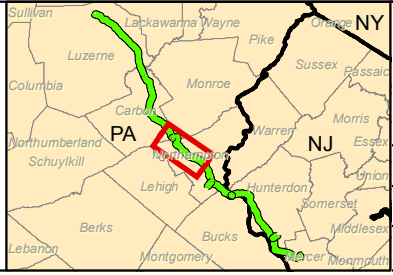
County Boundary

Reference:
esri Streets

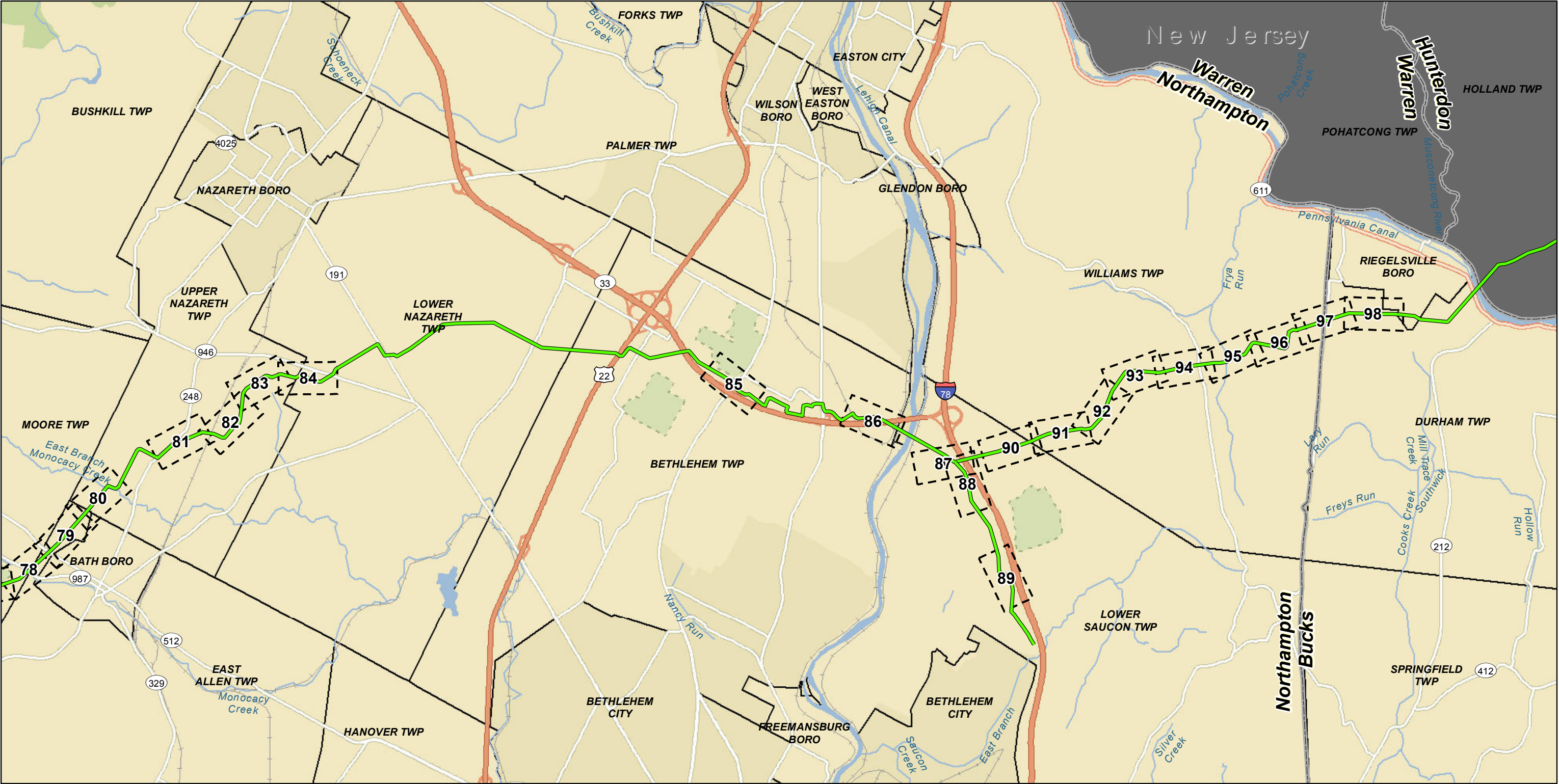
PennEast Pipeline Company, LLC

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale



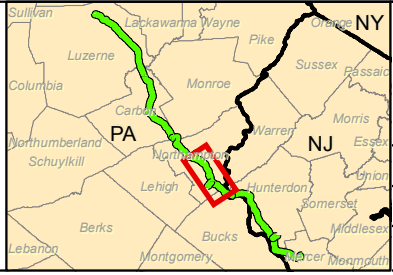
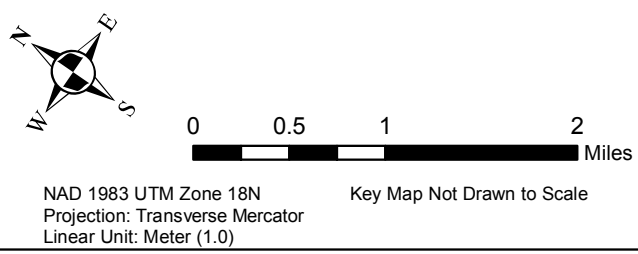
TITLE: Figure 2 - Sheet 5 of 6 PennEast Pipeline Project Wetland and Riparian Reforestation Map - Pennsylvania Index Sheets			
LOC: Northampton County (main county in view)			REV.:
CKD. BY: SB	ENG.:	Date: 10/10/2019	W.O.:
DRN. BY: CDW	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 5 of 6



Legend

Index Map Extent Municipality Boundary County Boundary

Reference:
esri Streets



TITLE: Figure 2 - Sheet 6 of 6 PennEast Pipeline Project Wetland and Riparian Reforestation Map - Pennsylvania Index Sheets			
LOC: Northampton County (main county in view)			REV.:
CKD. BY: SB	ENG.:	Date: 10/10/2019	W.O.:
DRN. BY: CDW	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 6 of 6

Drawn By & Date/Time: sheril.roth Oct 14, 2019 - 3:05pm
Drawing Location & Name: S:\Projects\Private-Sector\UGI\20000363_PA_Pipeline\CAD\2019 Restoration Plan\RP-01-07 PnEst Rest Notes-Dets.dwg

PROJECT PLANTING NOTES:

- 1) STRAW/MULCH WILL BE USED WITH SEEDING AND PLANTING.
- 2) EROSION CONTROL BLANKETS WILL BE USED. FOR FURTHER EROSION CONTROL MEASURES PLEASE SEE THE EROSION AND SEDIMENT CONTROL PLAN (E&SCP).
- 3) PLANTING AND SEEDING MAY HAPPEN AT DIFFERENT TIMES OF YEAR, OR IN DIFFERENT GROWING SEASONS. IF THERE WILL BE A DELAY IN PLANTING, A COVER CROP WILL BE INSTALLED.

A. COVER CROP TO BE PLANTED AT 30 LB PER ACRE

B. DRY SITES - GRAIN OATS: (JAN 1-AUG 1); OR GRAIN RYE: (AUG 1-JAN 1)

C. MOIST SITES - GRAIN RYE YEAR-ROUND
- 4) SEEDING

A. ALL DISTURBED AREAS (EXCEPT EXISTING GRAVEL ACCESS ROADS) WILL BE SEEDED.

I. IN RIPARIAN AREAS WHERE SLOPE EXCEEDS 10%, THE STANDARD UPLAND ROW SEED MIX WILL BE APPLIED. SEE EROSION AND SEDIMENT CONTROL PLAN (E&SCP) FOR DETAILS.

B. ERNST FACW MEADOW MIX (ERNMX- 122) WAS DESIGNATED FOR AREAS OF THE WORKSPACE WITHIN A WETLAND, LIMITS OF WHICH ARE SHOWN ON THE E&SCP DRAWINGS.

I. THIS MIX REQUIRES AN ADDITIONAL COVER CROP TO BE PLANTED (SEE ABOVE #3).

II. IF SEEDING IN FALL OR WINTER AN ALTERNATIVE MIX WITH WINTER WHEAT INSTEAD OF GRAIN OATS SHOULD BE USED.

III. AN ALTERNATIVE SEED MIX MAY BE REQUESTED BY THE LANDOWNER(S).

IV. AN ALTERNATIVE CONSERVATION WETLAND SEED MIX THAT CONTAINS SIMILAR SPECIES IS ACCEPTABLE. IF AN ALTERNATIVE SEED MIX IS USED, FOLLOW MANUFACTURER'S SEED RATE RECOMMENDATIONS.

C. ERNST RIPARIAN BUFFER MIX (ERNMX-178) WAS DESIGNATED FOR AREAS OF WORKSPACE WITHIN A RIPARIAN BUFFER.

I. THIS MIX REQUIRES AN ADDITIONAL COVER CROP TO BE PLANTED (SEE ABOVE #3).

II. IF SEEDING IN FALL OR WINTER AN ALTERNATIVE MIX WITH WINTER WHEAT INSTEAD OF GRAIN OATS SHOULD BE USED.
- D. ERNST SEED MIX LINKS:
- I. ERNST FACW MEADOW MIX (ERNMX-122) - [HTTPS://WWW.ERNSTSEED.COM/PRODUCT/PA-PIEDMONT-PROVINCE-FACW-MIX/](https://www.ernstseed.com/product/pa-piedmont-province-facw-mix/)

II. ERNST RIPARIAN BUFFER MIX (ERNMX-178) - [HTTPS://WWW.ERNSTSEED.COM/PRODUCT/RIPARIAN- BUFFER-MIX/](https://www.ernstseed.com/product/riparian-buffer-mix/)

5) SHRUB PLANTINGS

A. PLANTINGS WILL OVERLAP SEEDED AREAS WITHIN THE WORKSPACE.

B. SHRUBS WILL BE PLANTED AT A SPACING OF 10-FT. ON CENTER.

I. EXACT PLANTING LOCATIONS AND SPECIES DISTRIBUTION WILL BE AT THE DISCRETION OF THE FORESTRY CONTRACTOR, AND DEPENDENT ON STOCK AVAILABILITY AT THE TIME OF PLANTING.

C. GUARANTEE 75% SURVIVAL AT THE END OF THE SECOND GROWING SEASON.

6) TREE PLANTINGS

A. PLANTINGS WILL OVERLAP SEEDED AREAS WITHIN THE WORKSPACE.

B. TREES WILL BE PLANTED IN TEMPORARY WORKSPACE IN NON-ROCKY AREAS AT A SPACING OF 10-FT. ON CENTER.

I. EXACT PLANTING LOCATIONS AND SPECIES DISTRIBUTION WILL BE AT THE DISCRETION OF THE FORESTRY CONTRACTOR, AND DEPENDENT ON STOCK AVAILABILITY AT THE TIME OF PLANTING.

C. PROTECTION AND SURVIVAL MEASURES WILL INCLUDE:

I. 24" COCO MATS,

II. SPIRAL TREE WRAPS WILL BE INSTALLED ON ALL TREES AND REMOVED IN 2-YEARS TIME.

D. GUARANTEE 75% SURVIVAL AT THE END OF THE SECOND GROWING SEASON.
- GENERAL PLANTING NOTES:
1. PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED: INCLUDING ALL LABOR MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS AND CLEAN UP.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT DID TO EXISTING GRADE.

3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL-DEVELOPED BRANCHES, DENSELY FOLIATED VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES.

4. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.

5. INSOFAR AS IT IS PRACTICAL, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT SHRUBS NOT PLANTED FROM DRYING. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE (3) DAY PERIOD AFTER DELIVERY.

6. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WATER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTING SEASONS ARE DEFINED AS FEBRUARY 15 THROUGH MAY 1 AND SEPTEMBER 1 THROUGH OCTOBER 15. PLANTING IS ACCEPTABLE DURING OTHER MONTHS IF WEATHER PERMITS, THE GROUND IS NOT FROZEN AND SUPPLEMENTAL WATERING IS PROVIDED IN THE SUMMER.

7. LANDSCAPE CONTRACTOR SHALL CONFIRM LOCATION OF ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION.
-
- PennEast Pipeline Company, LLC
- NAD 1883 PA83-NF
- | | | | | | | | | | | | | |
|-----|------------|--------------------------|--|----|-----|-----|-----|--|---------------------|-------|----------|--------------|
| | | | | | | | | TITLE:
<div>PENNEAST PIPELINE PROJECT
WETLAND AND RIPARIAN REFORESTATION PLAN
REFORESTATION NOTES AND DETAILS</div> | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | LOC: BUCKS, CARBON, LUZERNE, MONROE AND NORTHAMPTON COUNTIES | | | | REV.: |
| 0 | 10/14/2019 | ISSUED FOR CLIENT REVIEW | | SR | SB | SB | HB | CKD BY: SB | ENG: | DATE: | W.O.: | |
| NO. | DATE | REVISIONS | | BY | CHK | APP | APP | DRN BY: SR | SCALE: NOT TO SCALE | | DWG NO.: | SHEET 1 OF 7 |

Drawn By & Date/Time: sheril.roth Oct 14, 2019 - 3:05pm
Drawing Location & Name: S:\Projects\Private-Sector\UGI\20000363_PA_Pipeline\CAD\2019 Restoration Plan\RP-01-07 PnEst Rest Notes-Dets.dwg

PLANTING SCHEDULE

SEED MIXES			
SCIENTIFIC NAME	COMMON NAME	PERCENT OF MIX	POUNDS PER ACRE
Ernst FACW MEADOW MIX	Ernst Item Number: ERNMX-122		20 (with 30 lbs/acre of cover crop)
Carex vulpinoidea, PA Ecotype	Fox Sedge, PA Ecotype	28.0%	5.60
Elymus virginicus, PA Ecotype	Virginia Wildrye, PA Ecotype	20.0%	4.00
Carex lupulina, PA Ecotype	Hop Sedge, PA Ecotype	15.0%	3.00
Carex scoparia, PA Ecotype	Blunt Broom Sedge, PA Ecotype	14.0%	2.80
Carex intumescens, PA Ecotype	Bladder (Star) Sedge, PA Ecotype	9.0%	1.80
Asclepias incarnata, PA Ecotype	Swamp Milkweed, PA Ecotype	3.0%	0.60
Heliopsis helianthoides, PA Ecotype	Oxeye Sunflower, PA Ecotype	3.0%	0.60
Juncus effusus	Soft Rush	3.0%	0.60
Eupatorium perfoliatum, PA Ecotype	Boneset, PA Ecotype	1.5%	0.30
Iris versicolor, PA Ecotype	Blueflag, PA Ecotype	1.5%	0.30
Alisma subcordatum, PA Ecotype	Mud Plantain (Water Plantain), PA Ecotype	1.0%	0.20
SCIENTIFIC NAME	COMMON NAME	PERCENT OF MIX	POUNDS PER ACRE
Ernst RIPARIAN BUFFER MIX	Ernst Item Number: ERNMX-178		20 (with 30 lbs/acre of cover crop)
Panicum clandestinum, 'Tioga'	Deertongue, 'Tioga'	30.0%	6.0
Elymus riparius, PA Ecotype	Riverbank Wildrye, PA Ecotype	16.5%	3.3
Sorghastrum nutans, NY4 Ecotype	Indiangrass, NY4 Ecotype	16.0%	3.2
Andropogon gerardii, 'Niagara'	Big Bluestem, 'Niagara'	10.0%	2.0
Panicum virgatum, 'Carthage', NC Ecotype	Switchgrass, 'Carthage', NC Ecotype	7.0%	1.4
Chamaecrista fasciculata, PA Ecotype	Partridge Pea, PA Ecotype	4.0%	0.8
Rudbeckia hirta, Coastal Plain NC Ecotype	Blackeyed Susan, Coastal Plain NC Ecotype	3.0%	0.6
Asclepias incarnata, PA Ecotype	Swamp Milkweed, PA Ecotype	2.5%	0.5
Heliopsis helianthoides, PA Ecotype	Oxeye Sunflower, PA Ecotype	2.5%	0.5
Aster pilosus, PA Ecotype	Heath Aster, PA Ecotype	2.0%	0.4
Juncus effusus	Soft Rush	2.0%	0.4
Juncus tenuis, PA Ecotype	Path Rush, PA Ecotype	2.0%	0.4
Eupatorium perfoliatum, PA Ecotype	Boneset, PA Ecotype	1.5%	0.3
Vernonia noveboracensis, PA Ecotype	New York Ironweed, PA Ecotype	1.0%	0.2

GENERAL PLANTING NOTES:

1.
- WETLAND SEEDING SHALL BE COMPLETED AFTER PIPELINE INSTALLATION AND COMPLETION OF FINAL GRADING.
2.
- RIPARIAN PLANTING SHALL BE COMPLETED AFTER CHANNEL CROSSING IS COMPLETED. NO TREES SHALL BE PLATED WITHIN 15 FEET OF THE CENTERLINE OF ANY PIPELINE (EXISTING OR PROPOSED).
3.
- LOCATION OF PLANTINGS AND SEEDING IS APPROXIMATE. THE FINAL LOCATION OF ALL PLANTING AND SEEDING SHALL BE DETERMINED IN THE FIELD BY PENNEAST OR THEIR REPRESENTATIVE.
4.
- AN ATTEMPT SHALL BE MADE TO INSTALL PLANT MATERIALS ON THE DAY OF DELIVERY. THE CONTRACTOR SHALL PROTECT THE PLANTS BY PLACING THEM IN THE SHADE AND WATERING UNTIL THEY ARE INSTALLED. ALL PLANTS SHALL BE INSTALLED WITHIN 3 DAYS OF DELIVERY.

PLANTINGS		
PALUSTRINE SCRUB-SHRUB (PSS) PLANTING MIX		
SCIENTIFIC NAME	COMMON NAME	SIZE
Shrub Species		
Sambucus spp.	Elderberry	1-2 gallon
Alnus serrulata	Smooth alder	1-2 gallon
Cephalanthus occidentalis	Buttonbush	1-2 gallon
Cornus amomum	Silky dogwood	1-2 gallon
Viburnum dentatum	Arrowwood Viburnum	1-2 gallon
PALUSTRINE FORESTED (PFO) PLANTING MIX		
SCIENTIFIC NAME	COMMON NAME	SIZE
Shrub Species		
Cephalanthus occidentalis	Buttonbush	1-2 gallon
Cornus amomum	Silky dogwood	1-2 gallon
Ilex verticillata (L.) A. Gray	Winterberry	1-2 gallon
Ilex glabra	Inkberry	1-2 gallon
Tree Species		
Acer rubrum*	Red Maple*	1-2 gallon
Quercus bicolor*	Swamp White Oak*	1-2 gallon
Abies balsamea**	Balsam Fir**	1-2 gallon
Pinus strobus**	White Pine**	1-2 gallon
Picea Mariana**	Black Spruce**	1-2 gallon
Tsuga canadensis**	Tsuga canadensis**	1-2 gallon
Betula alleghaniensis	Yellow Birch	1-2 gallon
Nyssa sylvatica	Black Gum	1-2 gallon
RIPARIAN PLANTING MIX		
SCIENTIFIC NAME	COMMON NAME	SIZE
Shrub Species		
Viburnum dentatum	Arrowwood Viburnum	1-2 gallon
Sambucus spp.	Elderberry	1-2 gallon
Physocarpus opulifolius	Ninebark	1-2 gallon
Prunus virginiana L.	Red choke cherry	1-2 gallon
Ilex verticillata (L.) A. Gray	Winterberry	1-2 gallon
Tree Species		
Quercus rubra*	Red Oak*	1-2 gallon
Acer saccharum*	Sugar Maple*	1-2 gallon
Quercus palustris*	Pin Oak*	1-2 gallon
Prunus serotina*	Black Cherry*	1-2 gallon
Abies balsamea**	Balsam Fir**	1-2 gallon
Pinus strobus**	White Pine**	1-2 gallon
Picea Mariana**	Black Spruce**	1-2 gallon
Tsuga canadensis**	Tsuga canadensis**	1-2 gallon
Betula alleghaniensis	Yellow Birch	1-2 gallon
*Not to be used between MP 27.1R2-32.1R2		
**Only to be used between MP 27.1R2-32.1R2		



PennEast Pipeline Company, LLC

NAD 1883 PA83-NF

								TITLE: PENNEAST PIPELINE PROJECT WETLAND AND RIPARIAN REFORESTATION PLAN REFORESTATION NOTES AND DETAILS			
								LOC: BUCKS, CARBON, LUZERNE, MONROE AND NORTHAMPTON COUNTIES			
0	10/14/2019	ISSUED FOR CLIENT REVIEW	SR	SB	SB	HB		CKD BY: SB	ENG:	DATE:	W.O.:
NO.	DATE	REVISIONS	BY	CHK	APP	APP		DRN BY: SR	SCALE: NOT TO SCALE	DWG NO.:	SHEET 2 OF 7

Drawn By & Date/Time: sheril.roth Oct 14, 2019 - 3:05pm
Drawing Location & Name: S:\Projects\Private-Sector\UGI\20000363_PA_Pipeline\CAD\2019 Restoration Plan\RP-01-07 PnEst Rest Notes-Dets.dwg



PennEast Pipeline Company, LLC

				WETLAND RESTORATION		ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	RIPARIAN RESTORATION	
RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS	ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
PennEast Mainline Pipeline								
050715_JC_1001_PSS	0.1	Luzerne	CWF, MF	0.890	0.517	-	-	-
050715_JC_1001b_PEM	0.1	Luzerne	CWF, MF	0.000	-	-	-	-
050715_JC_1001a_PEM	0.1	Luzerne	CWF, MF	0.023	-	-	-	-
050715_JC_1002_I_MI	0.2R3	Luzerne	CWF, MF	-	-	-	0.061	0.029
092414_GO_1001_P_IM	0.6	Luzerne	CWF, MF	-	-	-	0.393	0.277
032818_WA_1000_P_IN	1.4	Luzerne	CWF, MF	-	-	-	0.388	0.230
032818_WA_001_PFO	1.4	Luzerne	CWF, MF	0.089	-	0.059	-	-
050416_DB_1001_I_MI	2.1	Luzerne	CWF, MF	-	-	-	0.383	0.184
050416_DB_1001_PFO	2.1	Luzerne	CWF, MF	0.089	-	0.055	-	-
011815_JC_1000_I_MI	2.6	Luzerne	CWF, MF	-	-	-	0.444	0.264
011815_JC_1002_I_MI	3.1	Luzerne	CWF, MF	-	-	-	0.069	0.033
011815_JC_1001_P_MI	3.1	Luzerne	CWF, MF	-	-	-	0.248	0.154
011815_JC_002_PFO	3.1	Luzerne	CWF, MF	0.241	-	0.149	-	-
011815_JC_002_PFO	3.1	Luzerne	CWF, MF	0.241	-	0.149	-	-
101717_AB_1001_I_MI	3.5	Luzerne	CWF, MF	-	-	-	0.489	0.350
020916_BT_1001_I_MI	4.3R2	Luzerne	CWF, MF	-	-	-	0.708	0.416
020916_BT_1003_P_MI	4.3R2	Luzerne	CWF, MF	-	-	-	0.368	0.204
020916_BT_1008_I_MI	4.8R3	Luzerne	CWF, MF	-	-	-	0.069	0.041
020916_BT_1004_I_MI	5R3	Luzerne	CWF, MF	-	-	-	0.810	0.516
020916_BT_1005_I_MI	5R3	Luzerne	CWF, MF	-	-	-	0.000	0.000
020916_BT_1006_I_MI	5R3	Luzerne	CWF, MF	-	-	-	0.093	0.063
020916_BT_1007_I_MI	5.1	Luzerne	CWF, MF	-	-	-	0.577	0.404
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092314_GO_1001_I_MI	6	Luzerne	CWF, MF	-	-	-	0.443	-
092314_GO_001_PSS	6	Luzerne	CWF, MF	0.013	0.005	-	-	-
092414_GO_1002_I_IN	6.1	Luzerne	CWF, MF	-	-	-	0.440	0.298
092414_GO_1003_P_IM	6.2R2	Luzerne	CWF, MF	-	-	-	0.078	0.048
102315_WA_1001_P_MA	7.1	Luzerne	WWF, MF	-	-	-	4.429	0.603
071416_GM_1002_E_IN	9.7R2	Luzerne	CWF, MF	-	-	-	0.040	0.018
071416_GM_1001_P_IN	9.7R2	Luzerne	CWF, MF	-	-	-	0.441	0.340
050416_DB_1002_I_MI	10.1R2	Luzerne	CWF, MF	-	-	-	0.984	0.730
110514_JC_1002_P_IM	10.8R2	Luzerne	CWF, MF	-	-	-	0.377	0.237
110514_JC_1003_E_MI	10.9R2	Luzerne	CWF, MF	-	-	-	0.105	0.067
121614_JC_1000_P_MI	11.5R2	Luzerne	CWF, MF	-	-	-	0.495	0.333
121614_JC_1002_I_MI	11.6R2	Luzerne	CWF, MF	-	-	-	0.027	0.027
121614_JC_1001_E_MI	11.6R2	Luzerne	CWF, MF	-	-	-	0.521	0.332
072219_MU_1000_PEM	12.1R3	Luzerne	CWF, MF	0.199	-	-	-	-
072219_MU_1000_I_MI	12.2R3	Luzerne	CWF, MF	-	-	-	0.019	0.019
072219_MU_1002_PEM	12.2R3	Luzerne	CWF, MF	0.020	-	-	-	-
072219_MU_1001_PFO	12.2R3	Luzerne	CWF, MF	0.086	-	0.086	-	-
121514_JC_1001_E_MI	12.4R2	Luzerne	CWF, MF	-	-	-	0.405	0.284
121814_JC_1010_P_MI	13	Luzerne	CWF, MF	-	-	-	0.390	0.265
121814_JC_1011_P_MI	13.1	Luzerne	CWF, MF	-	-	-	0.315	0.198
121814_JC_1013_E_MI	13.2	Luzerne	CWF, MF	-	-	-	0.059	-
081215_MK_017_P_IM	13.2	Luzerne	CWF, MF	-	-	-	0.060	0.060
060618_WA_002_PEM	13.2	Luzerne	CWF, MF	0.193	-	-	-	-
121814_JC_1008_P_MI	13.3	Luzerne	CWF, MF	-	-	-	0.213	0.131

				WETLAND RESTORATION		ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	RIPARIAN RESTORATION	
RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS	ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
121814_JC_1009_E_MI	13.3	Luzerne	CWF, MF	-	-	-	0.128	0.126
121814_JC_1007_E_MI	13.3	Luzerne	CWF, MF	-	-	-	0.148	0.089
121814_JC_1006_I_MI	13.6	Luzerne	CWF, MF	-	-	-	0.035	0.022
121814_JC_1005_P_MI	13.6	Luzerne	CWF, MF	-	-	-	0.391	0.233
121814_JC_1004_I_MI	13.7	Luzerne	CWF, MF	-	-	-	0.362	0.216
121814_JC_001_PEM	13.7	Luzerne	CWF, MF	0.015	-	-	-	-
121814_JC_1003_I_MI	13.8	Luzerne	CWF, MF	-	-	-	0.379	0.209
121814_JC_1002_P_MI	13.9	Luzerne	CWF, MF	-	-	-	0.460	0.289
121814_JC_1001_P_MI	13.9	Luzerne	CWF, MF	-	-	-	0.642	0.393
121814_JC_1000_I_MI	14	Luzerne	CWF, MF	-	-	-	0.406	0.225
111014_JC_1001_E_MI	14.1	Luzerne	CWF, MF	-	-	-	0.441	0.244
111014_JC_002_PFO	14.1	Luzerne	CWF, MF	0.045	-	0.043	-	-
041017_NJ_1002_I_MI	14.7	Luzerne	HQ-CWF, MF	-	-	-	0.873	0.593
042417_GM_1001_PFO	14.7	Luzerne	HQ-CWF, MF	0.043	-	0.025	-	-
043015_JC_1001_I_MI	15	Luzerne	HQ-CWF, MF	-	-	-	0.457	0.275
043015_JC_1001_PFO	15	Luzerne	HQ-CWF, MF	0.056	-	0.029	-	-
043015_JC_1001_PEM	15	Luzerne	HQ-CWF, MF	0.008	-	-	-	-
112114_JC_003B_PFO	16.1	Luzerne	HQ-CWF, MF	1.065	-	0.622	-	-
112114_JC_1003_P_IM	16.2	Luzerne	HQ-CWF, MF	-	-	-	0.252	0.154
112114_JC_1002_P_MI	16.2	Luzerne	HQ-CWF, MF	-	-	-	0.399	0.296
112114_JC_003A_PSS	16.2	Luzerne	HQ-CWF, MF	0.264	0.162	-	-	-
112114_JC_003B_PSS	16.2	Luzerne	HQ-CWF, MF	0.012	0.003	-	-	-
112114_JC_1001_P_MI	16.4	Luzerne	HQ-CWF, MF	-	-	-	0.507	0.314
112114_JC_002_PSS	16.4	Luzerne	HQ-CWF, MF	0.149	0.101	-	-	-
112114_JC_002_PEM	16.4	Luzerne	HQ-CWF, MF	0.002	-	-	-	-
112014_JC_1003_P_IM	16.7	Luzerne	HQ-CWF, MF	-	-	-	0.874	0.659
112014_JC_1002_P_MI	16.9	Luzerne	HQ-CWF, MF	-	-	-	0.521	0.340
112014_JC_002_PFO	16.9	Luzerne	HQ-CWF, MF	0.333	-	0.179	-	-
112014_JC_002_PEM	16.9	Luzerne	HQ-CWF, MF	0.058	-	-	-	-
102715_BB_002_E_MI	17	Luzerne	HQ-CWF, MF	-	-	-	0.892	0.791
112014_JC_1001_P_MI	17.7	Luzerne	HQ-CWF, MF	-	-	-	0.146	0.096
112014_JC_001_PFO	17.7	Luzerne	HQ-CWF, MF	0.520	-	0.293	-	-
112014_JC_001_PEM	17.7	Luzerne	HQ-CWF, MF	0.001	-	-	-	-
111914_JC_1002_P_IM	18.3	Luzerne	HQ-CWF, MF	-	-	-	0.516	0.307
111914_JC_1001_P_IM	18.4	Luzerne	HQ-CWF, MF	-	-	-	0.263	0.158
121814_JC_1014_E_MI	19	Luzerne	HQ-CWF, MF	-	-	-	0.428	0.300
121814_JC_1014_I_MI	19.1	Luzerne	HQ-CWF, MF	-	-	-	0.874	0.596
121614_JC_1009_P_IM	19.6	Luzerne	HQ-CWF, MF	-	-	-	0.761	0.521
111315_GM_1002_E_MI	19.7	Luzerne	HQ-CWF, MF	-	-	-	0.055	0.024
111315_GM_1001_E_MI	19.7	Luzerne	HQ-CWF, MF	-	-	-	0.217	0.136
121614_JC_1009_P_MI	19.7	Luzerne	HQ-CWF, MF	-	-	-	0.202	0.143
121614_JC_001_PEM	19.7	Luzerne	HQ-CWF, MF	0.001	-	-	-	-
121614_JC_001_PFO	19.7	Luzerne	HQ-CWF, MF	0.344	-	0.201	-	-
121614_JC_1007_P_MI	20	Luzerne	HQ-CWF, MF	-	-	-	0.573	0.337
121714_JC_1001_E_MI	20.1	Luzerne	HQ-CWF, MF	-	-	-	0.092	0.059
121614_JC_1006_P_MI	20.1	Luzerne	HQ-CWF, MF	-	-	-	0.864	0.529
121614_JC_1005_I_MI	20.7	Luzerne	HQ-CWF, MF	-	-	-	0.630	0.427
121614_JC_1004_I_MI	21.2	Luzerne	HQ-CWF, MF	-	-	-	0.540	0.324

	NAD 1883 PA83-NF							TITLE: PENNEAST PIPELINE PROJECT WETLAND AND RIPARIAN REFORESTATION PLAN REFORESTATION NOTES AND DETAILS			
								LOC: BUCKS, CARBON, LUZERNE, MONROE AND NORTHAMPTON COUNTIES			
		0	10/14/2019	ISSUED FOR CLIENT REVIEW		SR	SB	SB	HB	CKD BY: SB	ENG:
		NO.	DATE	REVISIONS		BY	CHK	APP	APP	DRN BY: SR	SCALE: NOT TO SCALE
										DATE:	W.O.:
										DWG NO.:	SHEET 3 OF 7

Drawn By & Date/Time: sheril.roth Oct 14, 2019 - 3:05pm
Drawing Location & Name: S:\Projects\Private-Sector\UGI\20000363_PA_Pipeline\CAD\2019 Restoration Plan\RP-01-07 PnEst Rest Notes-Dets.dwg



PennEast

PennEast Pipeline Company, LLC

RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	WETLAND RESTORATION		ACREAGE OF TREE AND SHRUB PLANTINGS IN PSS WETLANDS	RIPARIAN RESTORATION	
				FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS		ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
102115_WA_002_E_MI	22.5	Luzerne	HQ-CWF, MF	-	-	-	0.290	0.225
042017_MK_1002_P_MI	22.5	Luzerne	HQ-CWF, MF	-	-	-	0.164	0.164
102115_WA_001_E_MI	22.6	Luzerne	HQ-CWF, MF	-	-	-	0.773	0.464
102115_WA_001_I_MI	22.7	Luzerne	HQ-CWF, MF	-	-	-	0.191	0.107
050615_JC_1001_P_IM	22.7	Luzerne	HQ-CWF, MF	-	-	-	0.624	0.401
102115_WA_003_PFO	22.7	Luzerne	HQ-CWF, MF	0.019	-	0.016	-	-
052115_JC_1001_P_MA	23.1	Luzerne	HQ-CWF, MF	-	-	-	1.160	0.392
110614_JC_004_PFO	24.2	Carbon	HQ-CWF, MF	0.098	-	0.098	-	-
082219_MU_1006_PEM	24.3	Carbon	HQ-CWF, MF	0.004	-	-	-	-
110415_GM_1001_I_MI	24.5	Carbon	HQ-CWF, MF	-	-	-	0.622	0.419
110614_JC_002B_PFO	24.5	Carbon	HQ-CWF, MF	0.008	-	0.008	-	-
102114_JC_001B_PFO	26.4	Carbon	HQ-CWF, MF	0.032	-	0.014	-	-
102114_JC_1002_P_MI	26.5	Carbon	HQ-CWF, MF	-	-	-	0.293	0.103
102114_JC_1003_E_MI	26.5	Carbon	HQ-CWF, MF	-	-	-	0.503	0.223
102114_JC_001_PEM	26.5	Carbon	HQ-CWF, MF	0.491	-	-	-	-
102114_JC_1001_P_MI	26.6	Carbon	HQ-CWF, MF	-	-	-	1.741	1.267
072319_MU_1002_E_MI	26.6	Carbon	HQ-CWF, MF	-	-	-	-	-
112414_JC_004_PFO	26.7	Carbon	HQ-CWF, MF	0.061	-	-	-	-
102114_JC_001A_PSS	26.8R2	Carbon	HQ-CWF, MF	0.090	-	-	-	-
102114_JC_001_PFO	26.8R2	Carbon	HQ-CWF, MF	0.084	-	-	-	-
102314_JC_1001_P_MI	27.6R2	Carbon	HQ-CWF, MF	-	-	-	0.406	0.290
042415_JC_1005_PEM	29.7R2	Carbon	HQ-CWF, MF	0.196	-	-	-	-
050115_JC_1001_PFO	29.7R2	Carbon	HQ-CWF, MF	1.324	-	0.805	-	-
042415_JC_1003_PSS	30.4R2	Carbon	HQ-CWF, MF	0.066	0.013	-	-	-
042415_JC_1006_E_MI	30.5R2	Carbon	HQ-CWF, MF	-	-	-	1.804	1.004
042415_JC_1002_PEM	31.2R2	Carbon	HQ-CWF, MF	0.302	-	-	-	-
042415_JC_1001_PFO	31.3R2	Carbon	HQ-CWF, MF	2.495	-	1.500	-	-
110316_GM_1002_I_MI	32.6R3	Carbon	HQ-CWF, MF	-	-	-	0.395	0.230
110316_GM_1001_PFO	32.6R3	Carbon	HQ-CWF, MF	0.037	-	0.025	-	-
110316_GM_1001_I_MI	32.7R3	Carbon	HQ-CWF, MF	-	-	-	0.491	0.300
110316_GM_1003_I_MI	32.8R3	Carbon	HQ-CWF, MF	-	-	-	0.724	0.456
110316_GM_1001_PEM	32.8R3	Carbon	HQ-CWF, MF	0.151	-	-	-	-
110316_GM_1004_I_MI	32.9R3	Carbon	HQ-CWF, MF	-	-	-	0.636	0.377
042115_JC_1001_P_IN	33.2R3	Carbon	HQ-CWF, MF	-	-	-	0.493	0.266
042115_JC_1002_P_MI	33.3R3	Carbon	HQ-CWF, MF	-	-	-	0.104	0.052
042115_JC_1003_E_MI	33.4R3	Carbon	HQ-CWF, MF	-	-	-	0.449	0.215
042115_JC_1004_I_MI	33.6R3	Carbon	HQ-CWF, MF	-	-	-	2.022	1.304
042115_JC_1006_I_MI	33.7R3	Carbon	HQ-CWF, MF	-	-	-	0.701	0.352
042115_JC_1003_PFO	33.7R3	Carbon	HQ-CWF, MF	0.273	-	0.259	-	-
042315_JC_1001_I_MI	34.6R2	Carbon	EV, MF	-	-	-	0.035	0.024
042315_JC_1002_PEM	34.7R2	Carbon	EV, MF	0.121	-	-	-	-
042315_JC_1001_PFO	34.7R2	Carbon	EV, MF	1.561	-	0.898	-	-
042315_JC_1003_P_IN	34.8R3	Carbon	EV, MF	-	-	-	0.462	0.254
042315_JC_1002_P_MI	34.8R3	Carbon	EV, MF	-	-	-	0.225	0.124
042315_JC_1003_I_IN	34.8	Carbon	EV, MF	-	-	-	0.722	0.537
042315_JC_1004_PFO	35.4	Carbon	EV, MF	0.041	-	0.028	-	-
010716_GM_1001_VP	35.5	Carbon	EV, MF	0.013	-	-	-	-
060117_MB_1001_PFO	36	Carbon	EV, MF	0.524	-	0.337	-	-

RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	WETLAND RESTORATION		ACREAGE OF TREE AND SHRUB PLANTINGS IN PSS WETLANDS	RIPARIAN RESTORATION	
				FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS		ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
060117_MB_1001_PEM	36	Carbon	EV, MF	0.014	-	-	-	-
060117_MB_1001_P_MI	36.1	Carbon	EV, MF	-	-	-	0.383	0.192
060217_MB_1001_PEM	36.1	Carbon	EV, MF	0.005	-	-	-	-
060217_MB_1001_PFO	36.1	Carbon	EV, MF	0.389	-	0.233	-	-
050615_JC_1002_I_MI	36.5R3	Carbon	EV, MF	-	-	-	0.248	0.128
050615_JC_1001_PFO	36.7R3	Carbon	EV, MF	1.909	-	1.139	-	-
010816_DB_1001_I_MI	36.8R3	Carbon	EV, MF	-	-	-	0.396	0.279
061615_DB_1002_PFO	37.1R3	Carbon	EV, MF	0.582	-	0.348	-	-
061615_DB_1001_I_MI	37.5	Carbon	EV, MF	-	-	-	0.687	0.307
061615_DB_1001_PEM	37.5	Carbon	EV, MF	0.010	-	-	-	-
061615_DB_1002_P_IN	38.3	Carbon	EV, MF	-	-	-	0.529	0.218
040517_BT_1001_E_MI	41	Carbon	EV, MF	-	-	-	0.518	0.304
091516_GM_1002_E_MI	41.1	Carbon	EV, MF	-	-	-	0.620	0.374
040517_BT_1002_I_MI	41.1	Carbon	EV, MF	-	-	-	0.001	0.001
012717_GM_1002_P_MI	41.2	Carbon	EV, MF	-	-	-	0.568	0.340
012717_GM_1003_P_MI	41.2	Carbon	EV, MF	-	-	-	0.641	0.381
020117_GM_1006_PFO	41.2	Carbon	EV, MF	0.116	-	0.065	-	-
020117_GM_1002_P_MI	41.3	Carbon	EV, MF	-	-	-	0.557	0.334
020117_GM_1001_P_MI	41.6	Carbon	EV, MF	-	-	-	0.538	0.320
122215_DB_1001_P_MI	44.4R3	Carbon	CWF, MF	-	-	-	0.013	0.013
041018_WA_1000_P_MI	44.8R2	Carbon	HQ-CWF, MF	-	-	-	1.188	0.825
041018_WA_002_PSS	44.8R2	Carbon	HQ-CWF, MF	0.014	0.008	-	-	-
051115_JC_1002_P_MI	45R2	Carbon	HQ-CWF, MF	-	-	-	0.641	0.175
052915_JC_1001_PEM	45R2	Carbon	HQ-CWF, MF	0.060	-	-	-	-
051115_JC_1001_P_MI	45.6	Carbon	HQ-CWF, MF	-	-	-	0.899	0.695
051115_JC_1001_PEM	45.6	Carbon	HQ-CWF, MF	0.071	-	-	-	-
090914_WA_1000_P_IM	48.1	Carbon	CWF, MF	-	-	-	0.425	0.208
090914_WA_001_PSS	48.1	Carbon	CWF, MF	0.060	0.023	-	-	-
090914_WA_002_PSS	48.2	Carbon	CWF, MF	0.024	0.011	-	-	-
033018_WA_1001_E_MI	48.9R3	Carbon	HQ-CWF, MF	-	-	-	0.033	0.033
033018_WA_1003_P_MI	49.2R3	Carbon	HQ-CWF, MF	-	-	-	0.024	0.024
041217_GM_1001_P_IN	49.3R3	Carbon	HQ-CWF, MF	-	-	-	0.378	0.303
041117_GM_1001_E_MI	49.4R3	Carbon	HQ-CWF, MF	-	-	-	0.468	0.356
072618_WA_1005_I_MI	50.6R3	Carbon	HQ-CWF, MF	-	-	-	0.048	0.028
072618_WA_1007_I_MI	50.6R3	Carbon	HQ-CWF, MF	-	-	-	0.463	0.273
072618_WA_1008_I_MI	50.6R3	Carbon	HQ-CWF, MF	-	-	-	0.324	0.181
072618_WA_001_PEM	50.6R3	Carbon	HQ-CWF, MF	0.132	-	-	-	-
072618_WA_002_PEM	50.6R3	Carbon	HQ-CWF, MF	0.002	-	-	-	-
072618_WA_1000_I_MI	50.7R3	Monroe	HQ-CWF, MF	-	-	-	0.276	0.193
072618_WA_1006_I_MI	50.7R3	Carbon	HQ-CWF, MF	-	-	-	0.194	0.132
072618_WA_1001_P_MI	50.7R3	Carbon	HQ-CWF, MF	-	-	-	0.526	0.318
040517_GM_1001_PFO	52.4R3	Northampton	CWF, MF	0.038	-	0.012	-	-
040517_GM_1001_PEM	52.4R3	Northampton	CWF, MF	0.001	-	-	-	-
040617_GM_1001_PFO	52.5R3	Northampton	CWF, MF	0.060	-	0.032	-	-
040617_GM_1001_PEM	52.5R3	Northampton	CWF, MF	0.002	-	-	-	-
052918_WA_004_PFO	52.5R3	Northampton	CWF, MF	0.071	-	0.039	-	-
052918_WA_005_PEM	52.5R3	Northampton	CWF, MF	0.011	-	-	-	-
052918_WA_003_PFO	52.6R3	Northampton	CWF, MF	0.118	-	0.068	-	-

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0	10/14/2019	ISSUED FOR CLIENT REVIEW	SR	SB	SB	HB	CKD BY: SB	ENG:			DATE:	W.O.:
NO.	DATE	REVISIONS	BY	CHK	APP	APP	DRN BY: SR	SCALE: NOT TO SCALE			DWG NO.:	SHEET 4 OF 7

				WETLAND RESTORATION			RIPARIAN RESTORATION	
RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS	ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
080917_WA_003_PEM	52.7R3	Northampton	CWF, MF	0.025	-	-	-	-
080917_WA_002_PEM	52.7R3	Northampton	CWF, MF	0.037	-	-	-	-
110217_WA_1001_P_MI	52.8R3	Northampton	CWF, MF	-	-	-	0.058	-
080917_WA_1002_P_MI	52.8R3	Northampton	CWF, MF	-	-	-	0.687	0.295
080917_WA_002_PSS	52.8R3	Northampton	CWF, MF	0.035	0.026	-	-	-
110217_WA_001_PSS	52.8R3	Northampton	CWF, MF	0.005	0.005	-	-	-
110217_WA_1002_I_MI	52.9R3	Northampton	CWF, MF	-	-	-	0.038	-
110217_WA_1003_P_MI	52.9R3	Northampton	CWF, MF	-	-	-	0.084	-
110217_WA_005_PFO	52.9R3	Northampton	CWF, MF	0.080	-	-	-	-
110217_WA_006_PEM	52.9R3	Northampton	CWF, MF	0.000	-	-	-	-
080917_WA_1001_I_MI	53.2R3	Northampton	CWF, MF	-	-	-	0.134	0.096
050217_MB_1002_PEM	53.3R3	Northampton	CWF, MF	0.011	-	-	-	-
080917_WA_001_PEM	53.3R3	Northampton	CWF, MF	0.043	-	-	-	-
050217_MB_1001_P_IN	53.4R3	Northampton	CWF, MF	-	-	-	0.301	0.209
050217_MB_1002_I_MI	53.4R3	Northampton	CWF, MF	-	-	-	0.239	0.140
050217_MB_1001_PEM	53.4R3	Northampton	CWF, MF	0.069	-	-	-	-
050217_MB_1004_PFO	53.4R3	Northampton	CWF, MF	0.002	-	0.002	-	-
102815_WA_1001_E_MI	55.7	Northampton	CWF, MF	-	-	-	0.392	0.237
051215_JC_1003_I_MI	55.9	Northampton	CWF, MF	-	-	-	0.076	0.041
051215_JC_1002_P_IN	55.9	Northampton	CWF, MF	-	-	-	0.543	0.337
051215_JC_1001_E_MI	55.9	Northampton	CWF, MF	-	-	-	0.283	0.169
081815_MK_042_PEM	56	Northampton	CWF, MF	0.108	-	-	-	-
062218_WA_001_PFO	56	Northampton	CWF, MF	0.692	-	0.485	-	-
062218_WA_001_PEM	56	Northampton	CWF, MF	0.141	-	-	-	-
050417_GM_1002_P_MI	56.6	Northampton	CWF, MF	-	-	-	0.273	0.093
050417_GM_1001_I_MI	56.6	Northampton	CWF, MF	-	-	-	0.066	0.017
101717_AB_1001_PEM	56.6	Northampton	CWF, MF	0.000	-	-	-	-
052218_WA_002_PEM	56.6	Northampton	CWF, MF	0.007	-	-	-	-
050417_GM_1003_P_IN	56.7	Northampton	CWF, MF	-	-	-	0.457	0.262
050417_GM_1003_PEM	56.7	Northampton	CWF, MF	0.009	-	-	-	-
050417_GM_1002_PEM	56.7	Northampton	CWF, MF	0.078	-	-	-	-
071917_MB_1001_I_MI	58R2	Northampton	HQ-CWF, MF	-	-	-	0.143	0.084
052218_WA_1003_P_MI	58.5	Northampton	HQ-CWF, MF	-	-	-	0.076	0.076
052218_WA_1000_E_MI	58.5	Carbon	HQ-CWF, MF	-	-	-	0.794	0.255
052218_WA_003_PEM	58.5	Northampton	HQ-CWF, MF	0.058	-	-	-	-
090314_DB_1011_E_MI	59	Northampton	HQ-CWF, MF	-	-	-	0.068	0.041
090414_DB_1012_I_MI	59.2	Northampton	HQ-CWF, MF	-	-	-	0.200	0.149
090414_DB_008_PEM	59.2	Northampton	HQ-CWF, MF	0.068	-	-	-	-
090414_DB_1013_I_MI	59.3	Northampton	HQ-CWF, MF	-	-	-	0.747	0.504
051215_JC_1005_P_IN	60.3	Northampton	HQ-CWF, MF	-	-	-	0.394	0.271
090314_DB_1007_E_MI	60.6	Northampton	HQ-CWF, MF	-	-	-	0.109	0.086
090314_DB_1005_E_MI	60.6	Northampton	HQ-CWF, MF	-	-	-	0.355	0.262
090314_DB_1006_I_MI	60.7	Northampton	HQ-CWF, MF	-	-	-	0.792	0.599
090314_DB_004_PEM	60.7	Northampton	HQ-CWF, MF	0.099	-	-	-	-
111214_JC_1004_P_IM	61.5R3	Northampton	HQ-CWF, MF	-	-	-	0.376	0.247
102715_WA_1002_P_MI	62.4R3	Northampton	HQ-CWF, MF	-	-	-	0.118	0.074
051415_JC_1001_I_MI	62.8R3	Northampton	HQ-CWF, MF	-	-	-	0.545	-
041119_DHB_001_PEM	62.8R3	Northampton	HQ-CWF, MF	0.374	-	-	-	-

				WETLAND RESTORATION			RIPARIAN RESTORATION	
RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS	ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
051415_JC_1002_P_IN	63.6R2	Northampton	HQ-CWF, MF	-	-	-	0.259	0.163
042815_JC_1003_PEM	64.3R2	Northampton	HQ-CWF, MF	0.003	-	-	-	-
051415_JC_1004_POND_IN	68.7	Northampton	CWF, MF	-	-	-	0.276	0.150
010615_JC_1000_E_MI	70.6R3	Northampton	CWF, MF	-	-	-	0.395	0.283
010615_JC_1001_E_MI	70.7R3	Northampton	CWF, MF	-	-	-	0.112	0.101
012116_GM_1001_E_IN	71.5	Northampton	CWF, MF	-	-	-	0.159	0.159
092614_GO_1001_P_MI	72.1	Northampton	CWF, MF	-	-	-	0.179	0.101
092614_GO_002_PFO	72.1	Northampton	CWF, MF	0.136	-	0.079	-	-
031918_WA_1003_I_MI	72.4	Northampton	CWF, MF	-	-	-	0.255	0.153
031918_WA_001_PSS	72.4	Northampton	CWF, MF	0.233	0.142	-	-	-
040318_WA_0001_PEM	72.4	Northampton	CWF, MF	0.097	-	-	-	-
040318_WA_0001_PSS	72.4	Northampton	CWF, MF	0.146	0.099	-	-	-
051415_JC_1006_E_MI	72.5	Northampton	CWF, MF	-	-	-	0.414	0.266
031918_WA_1000_P_MI	72.5	Northampton	CWF, MF	-	-	-	0.172	0.103
051415_JC_1005_P_IN	72.6	Northampton	CWF, MF	-	-	-	0.844	0.431
012016_GM_1001_I_MI	72.6	Northampton	CWF, MF	-	-	-	0.007	0.007
051415_JC_1001_PEM	72.6	Northampton	CWF, MF	0.010	-	-	-	-
012116_GM_1001_PFO	72.6	Northampton	CWF, MF	0.050	-	0.039	-	-
012016_GM_1003_I_MI	72.7	Northampton	CWF, MF	-	-	-	0.000	0.000
012016_GM_1002_I_MI	72.7	Northampton	CWF, MF	-	-	-	0.011	0.011
102715_WA_1001_P_MI	72.7	Northampton	CWF, MF	-	-	-	1.030	0.570
102715_WA_1001_I_MI	72.7	Northampton	CWF, MF	-	-	-	0.091	0.090
042815_JC_1005_I_MI	72.8	Northampton	CWF, MF	-	-	-	0.062	0.029
042815_JC_1001_PFO	72.9	Northampton	CWF, MF	1.283	-	0.698	-	-
042815_JC_1001_E_MI	73	Northampton	CWF, MF	-	-	-	0.259	0.176
031716_NJ_002_PEM	73.1	Northampton	HQ-CWF, MF	0.138	-	-	-	-
031716_NJ_1002_I_MI	73.2	Northampton	HQ-CWF, MF	-	-	-	0.047	0.043
031716_NJ_1003_P_MI	73.2	Northampton	HQ-CWF, MF	-	-	-	0.124	0.124
031716_NJ_002_PSS	73.2	Northampton	HQ-CWF, MF	0.038	0.025	-	-	-
042117_GM_1003_P_MI	73.6R2	Northampton	HQ-CWF, MF	-	-	-	0.255	0.154
042117_GM_1001_P_MI	73.6R2	Northampton	HQ-CWF, MF	-	-	-	0.437	0.272
042117_GM_1001_PFO	73.6R2	Northampton	HQ-CWF, MF	0.098	-	0.056	-	-
042418_WA_1005_P_MI	73.7R2	Northampton	HQ-CWF, MF	-	-	-	0.050	0.047
042418_WA_1002_I_MI	73.7R2	Northampton	HQ-CWF, MF	-	-	-	0.071	0.042
042418_WA_1004_P_MI	73.7R2	Northampton	HQ-CWF, MF	-	-	-	0.801	0.523
042418_WA_006_PFO	73.7R2	Northampton	HQ-CWF, MF	0.099	-	0.062	-	-
042418_WA_008_PFO	73.7R2	Northampton	HQ-CWF, MF	0.121	-	0.068	-	-
042518_WA_001_PSS	74.3	Northampton	HQ-CWF, MF	0.062	0.043	-	-	-
091814_MK_1009_P_IM	74.7	Northampton	HQ-CWF, MF	-	-	-	0.134	0.087
062415_BT_1001_P_MI	74.9	Northampton	HQ-CWF, MF	-	-	-	0.738	0.532
062415_BT_1002_PEM	74.9	Northampton	HQ-CWF, MF	0.109	-	-	-	-
122016_LZ_1001_P_MI	75.1	Northampton	HQ-CWF, MF	-	-	-	0.290	-
122016_LZ_1002_PEM	75.1	Northampton	HQ-CWF, MF	0.066	-	-	-	-
042418_WA_001_PSS	75.1	Northampton	HQ-CWF, MF	0.258	0.162	-	-	-
042418_WA_001_PEM	75.1	Northampton	HQ-CWF, MF	0.000	-	-	-	-
042418_WA_002_PEM	75.1	Northampton	HQ-CWF, MF	0.004	-	-	-	-
042418_WA_002_PSS	75.1	Northampton	HQ-CWF, MF	0.037	0.027	-	-	-
042418_WA_003_PEM	75.2	Northampton	HQ-CWF, MF	0.165	-	-	-	-



PennEast Pipeline Company, LLC

NAD 1883 PA83-NF								TITLE: PENNEAST PIPELINE PROJECT WETLAND AND RIPARIAN REFORESTATION PLAN REFORESTATION NOTES AND DETAILS				
								LOC: BUCKS, CARBON, LUZERNE, MONROE AND NORTHAMPTON COUNTIES			REV.:	
	0	10/14/2019	ISSUED FOR CLIENT REVIEW	SR	SB	SB	HB	CKD BY: SB		ENG:	DATE:	W.O.:
	NO.	DATE	REVISIONS	BY	CHK	APP	APP	DRN BY: SR		SCALE: NOT TO SCALE	DWG NO.:	SHEET 5 OF 7

Drawn By & Date/Time: sheril.roth Oct 14, 2019 - 3:05pm
Drawing Location & Name: S:\Projects\Private-Sector\UG\20000363_PA_Pipeline\CAD\2019 Restoration Plan\RP-01-07 PnEst Rest Notes-Dets.dwg

				WETLAND RESTORATION		ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	RIPARIAN RESTORATION	
RESOURCE ID	MP	COUNTY	WATERSHED DESIGNATED / EXISTING USE	FACW MEADOW SEED MIX	ACREAGE OF SHRUB PLANTINGS IN PSS WETLANDS	ACREAGE OF TREE AND SHRUB PLANTINGS IN PFO WETLANDS	ACREAGE OF RIPARIAN BUFFER SEED MIX	ACREAGE OF TREE AND SHRUB PLANTINGS IN RIPARIAN BUFFERS
111314_JC_1002_I_MI	75.7	Northampton	EV, MF	-	-	-	0.708	0.423
111314_JC_003_PFO	75.7	Northampton	EV, MF	0.016	-	0.014	-	-
111314_JC_1001_I_MI	75.8	Northampton	EV, MF	-	-	-	0.420	0.301
051515_JC_1004_E_MI	76.2	Bucks	WWF, MF	-	-	-	0.179	0.111
Blue Mountain Lateral								
041017_GM_1001_P_MI	0.51R3	Carbon	HQ-CWF, MF	-	-	-	0.296	0.258
041117_GM_1002_E_MI	0.51R3	Carbon	HQ-CWF, MF	-	-	-	0.011	0.011
041017_GM_1001_P_IN	0.51R3	Carbon	HQ-CWF, MF	-	-	-	0.752	0.475
Hellertown Lateral								
062218_WA_1002_P_IN	0.3	Northampton	CWF, MF	-	-	-	0.512	0.354
062218_WA_1004_P_IN	0.3	Northampton	CWF, MF	-	-	-	0.029	0.029
010515_JC_1000_I_MI	1.4	Northampton	CWF, MF	-	-	-	0.106	0.077
Total				21.791	1.373	9.316	75.829	44.342

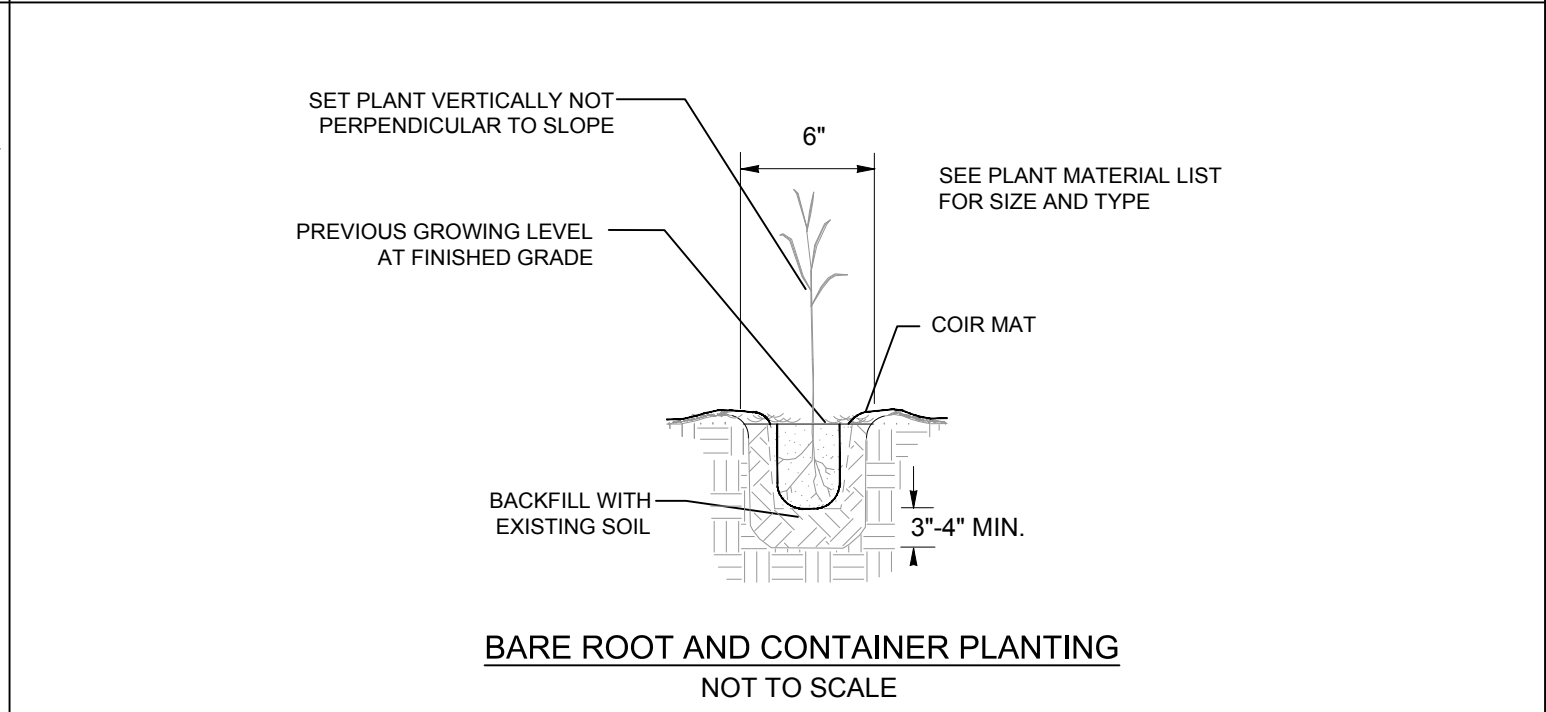
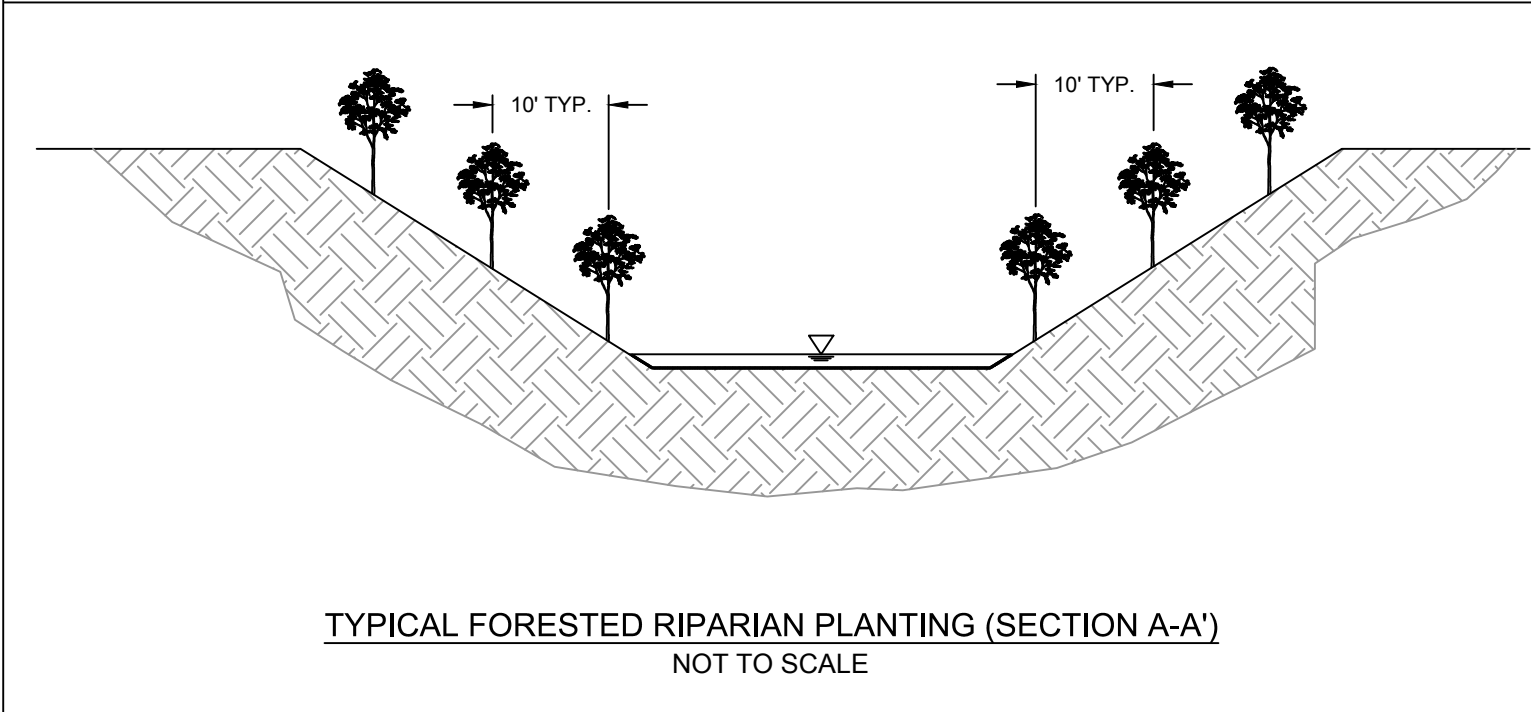
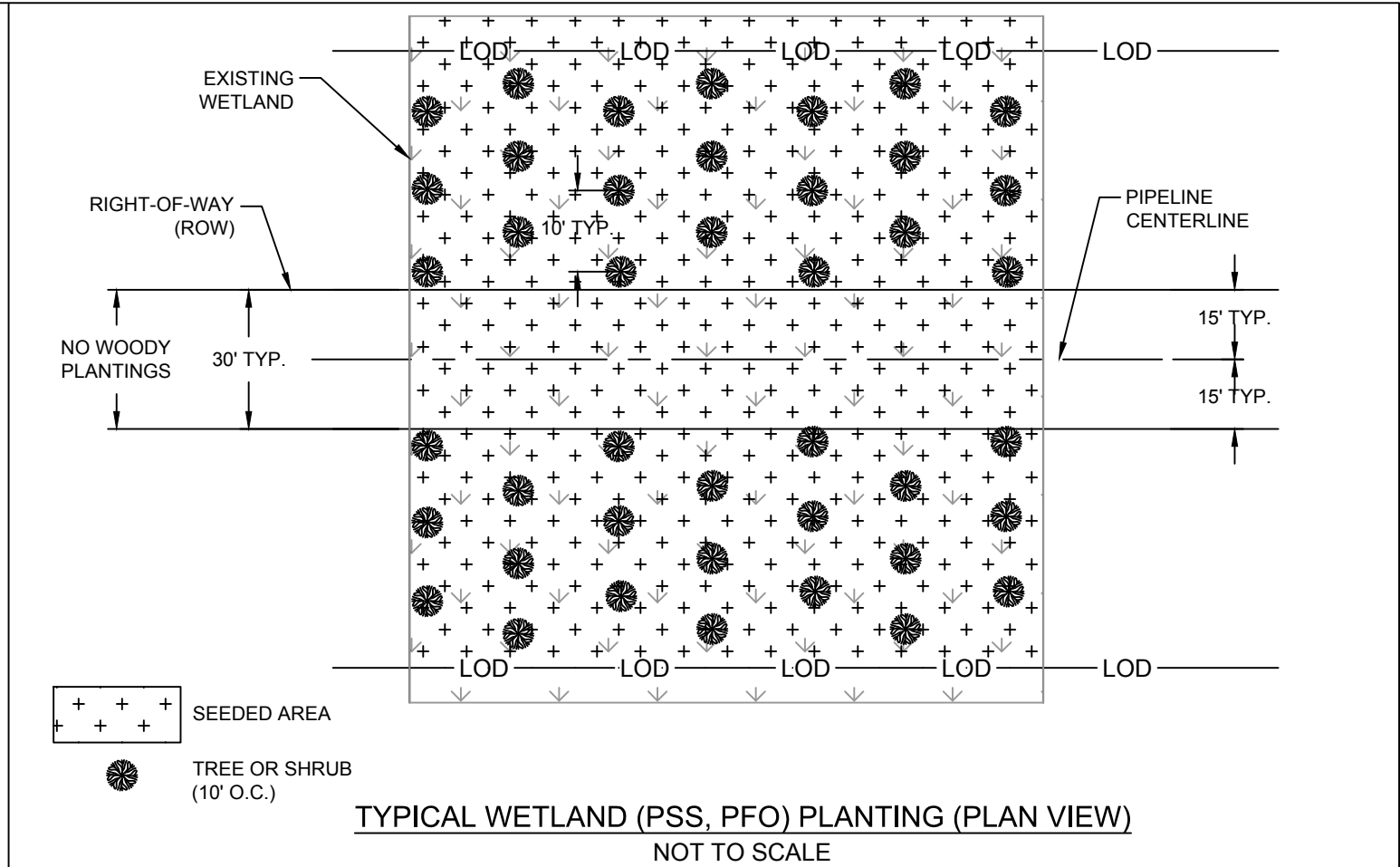
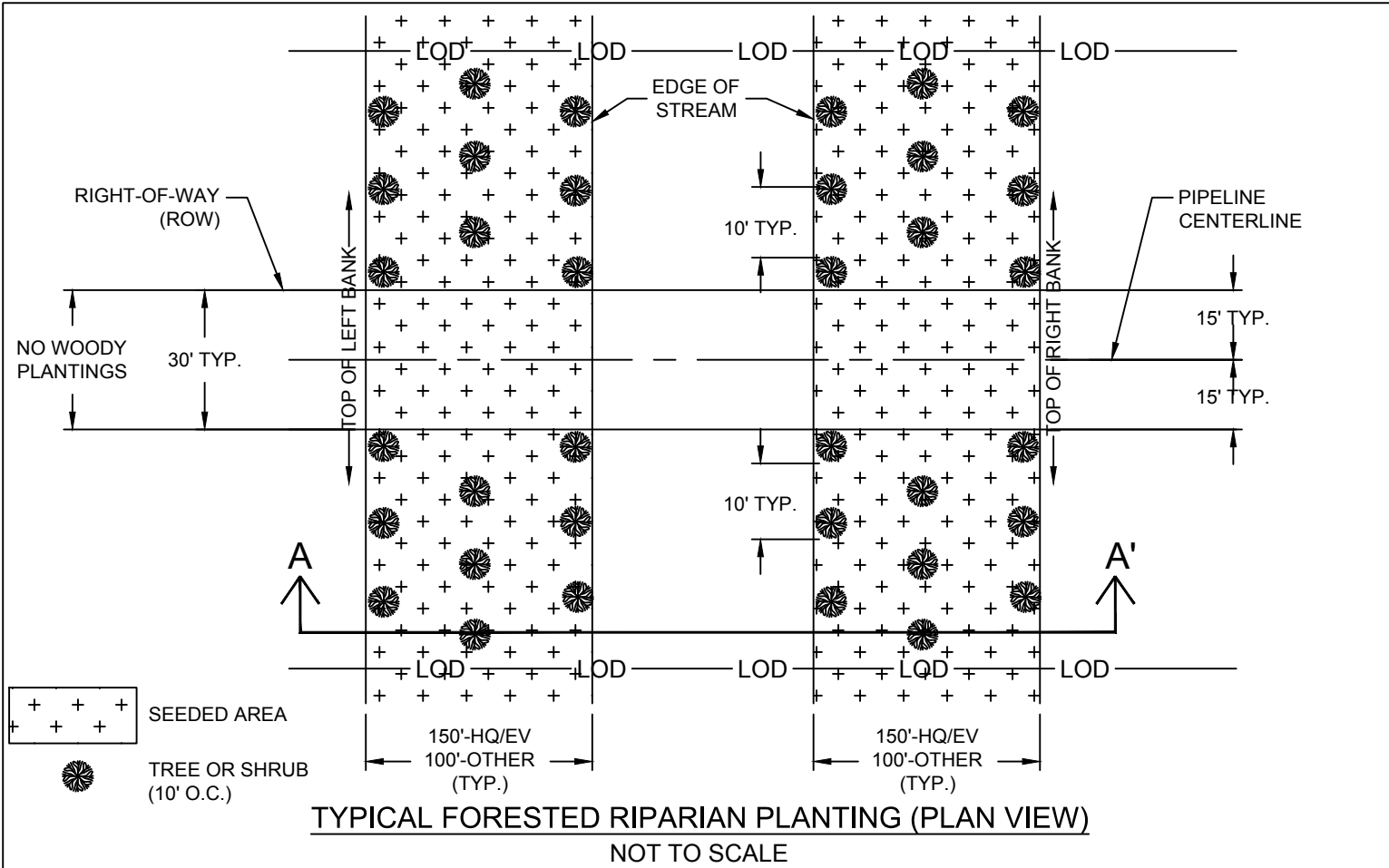



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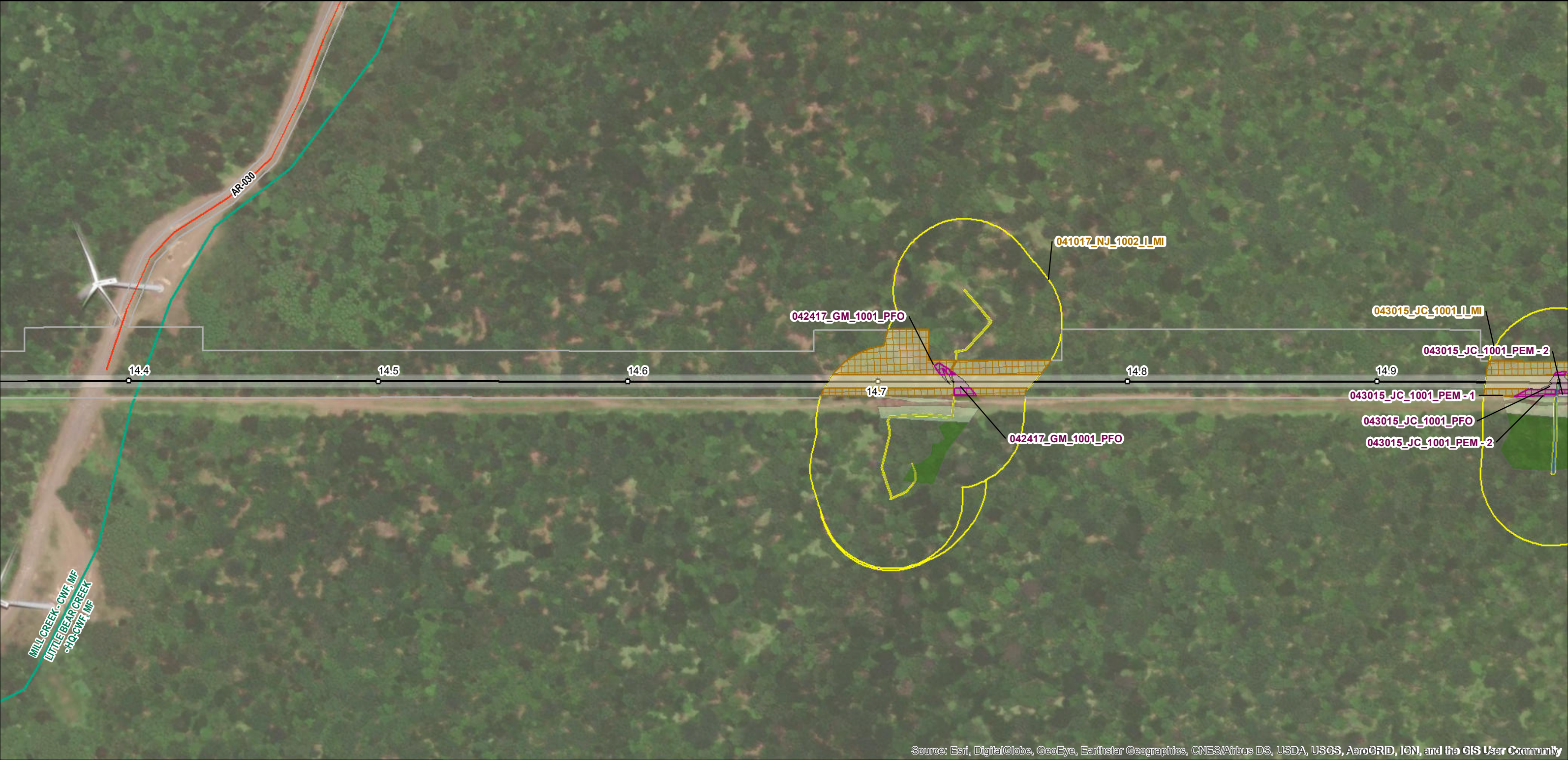
NAD 1883 PA83-NF

							TITLE: PENNEAST PIPELINE PROJECT WETLAND AND RIPARIAN REFORESTATION PLAN REFORESTATION NOTES AND DETAILS						
							LOC: BUCKS, CARBON, LUZERNE, MONROE AND NORTHAMPTON COUNTIES						REV.:
0	10/14/2019	ISSUED FOR CLIENT REVIEW	SR	SB	SB	HB	CKD BY: SB	ENG:			DATE:	W.O.:	
NO.	DATE	REVISIONS	BY	CHK	APP	APP	DRN BY: SR	SCALE: NOT TO SCALE			DWG NO.:	SHEET 6 OF 7	

Drawn By & Date/Time: sheril.roth Oct 14, 2019 - 3:05pm
Drawing Location & Name: S:\Projects\Private-Sector\UGI\20000363_PA_Pipeline\CAD\2019 Restoration Plan\RP-01-07 PnEst Rest Notes-Dets.dwg



 <i>PennEast Pipeline Company, LLC</i>	NAD 1883 PA83-NF							TITLE: PENNEAST PIPELINE PROJECT WETLAND AND RIPARIAN REFORESTATION PLAN REFORESTATION NOTES AND DETAILS				
								LOC: BUCKS, CARBON, LUZERNE, MONROE AND NORTHAMPTON COUNTIES			REV.:	
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		NO.	DATE	REVISIONS	BY	CHK	APP	APP	DRN BY: SR	SCALE: NOT TO SCALE	DWG NO.:	SHEET 7 OF 7



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
- POW

- 100-Foot Riparian Buffer
- 150-Foot Riparian Buffer
- Riparian Planting
- Wetland Planting
- Wetland Seeding
- Riparian Seeding
- Chapter 93 Designated Watershed

Notes:

- See planting schedule on Notes and Details sheets.
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- Wetland and riparian restoration is not proposed in agricultural, residential, or commercial/industrial areas.
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- ESRI Aerial Imagery, 2016



PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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BEAR CREEK TWP, LUZERNE, PA



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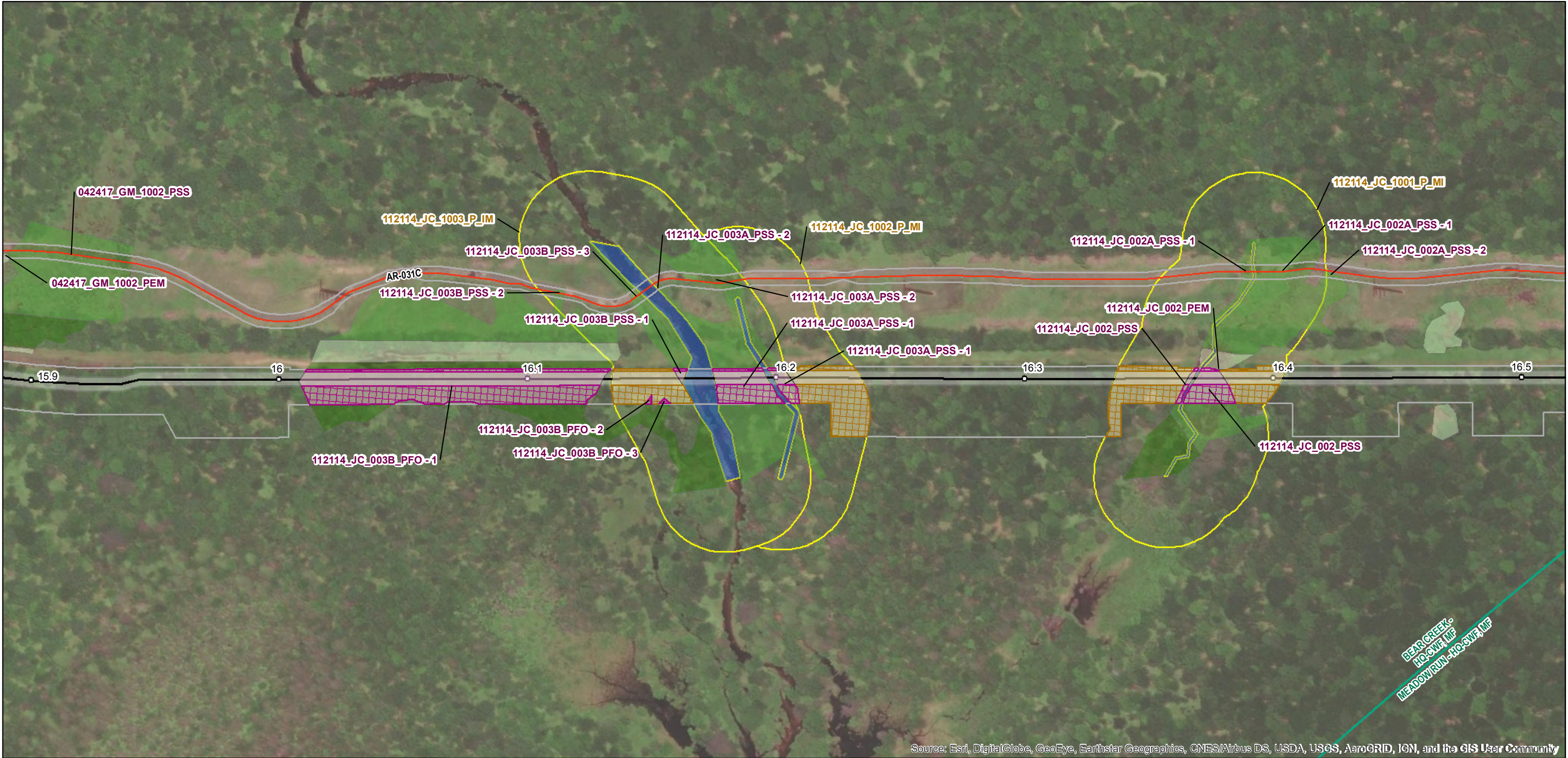


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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BEAR CREEK TWP, LUZERNE, PA



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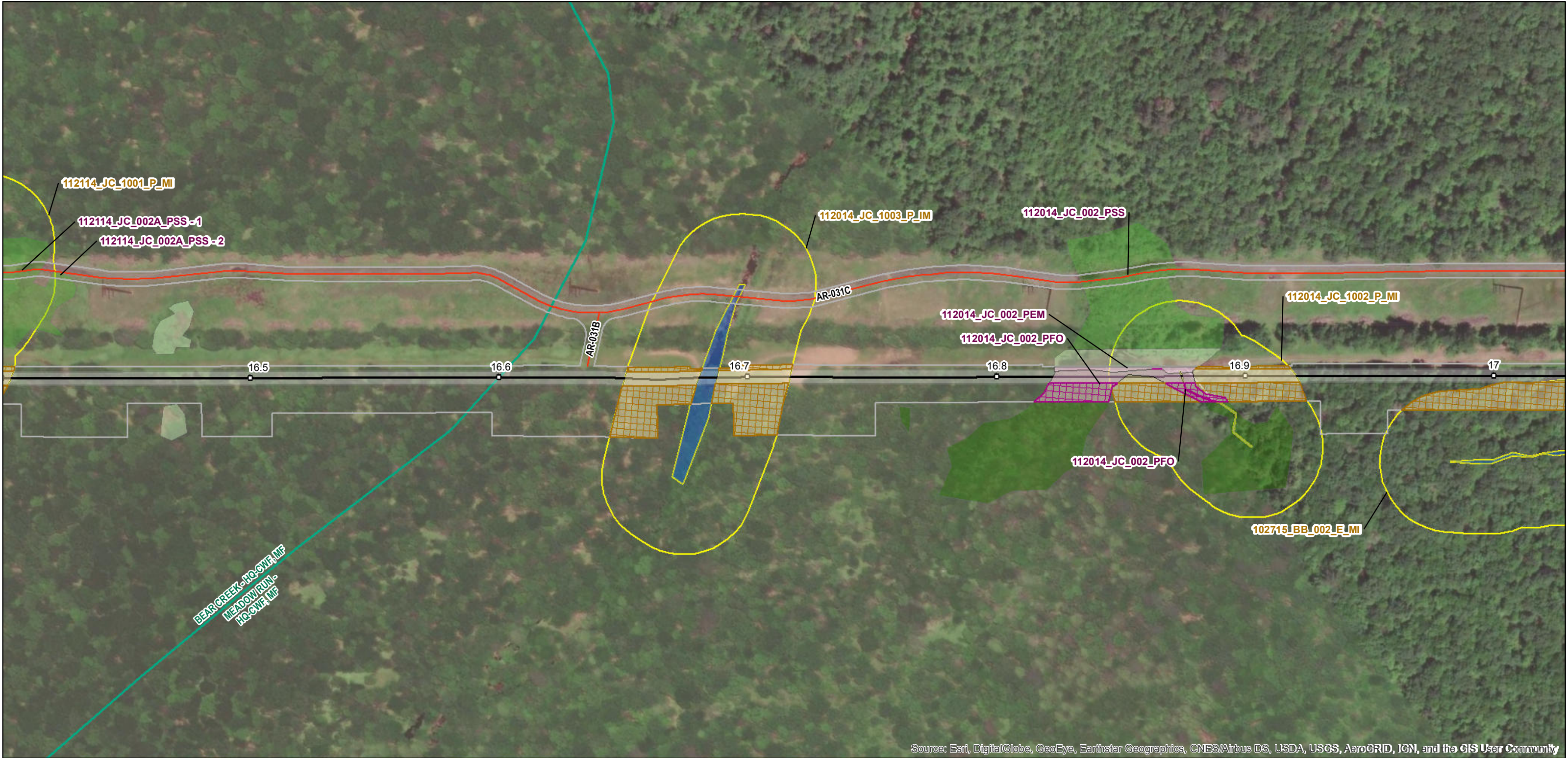


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Date: 10/11/2019

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BEAR CREEK TWP, LUZERNE, PA



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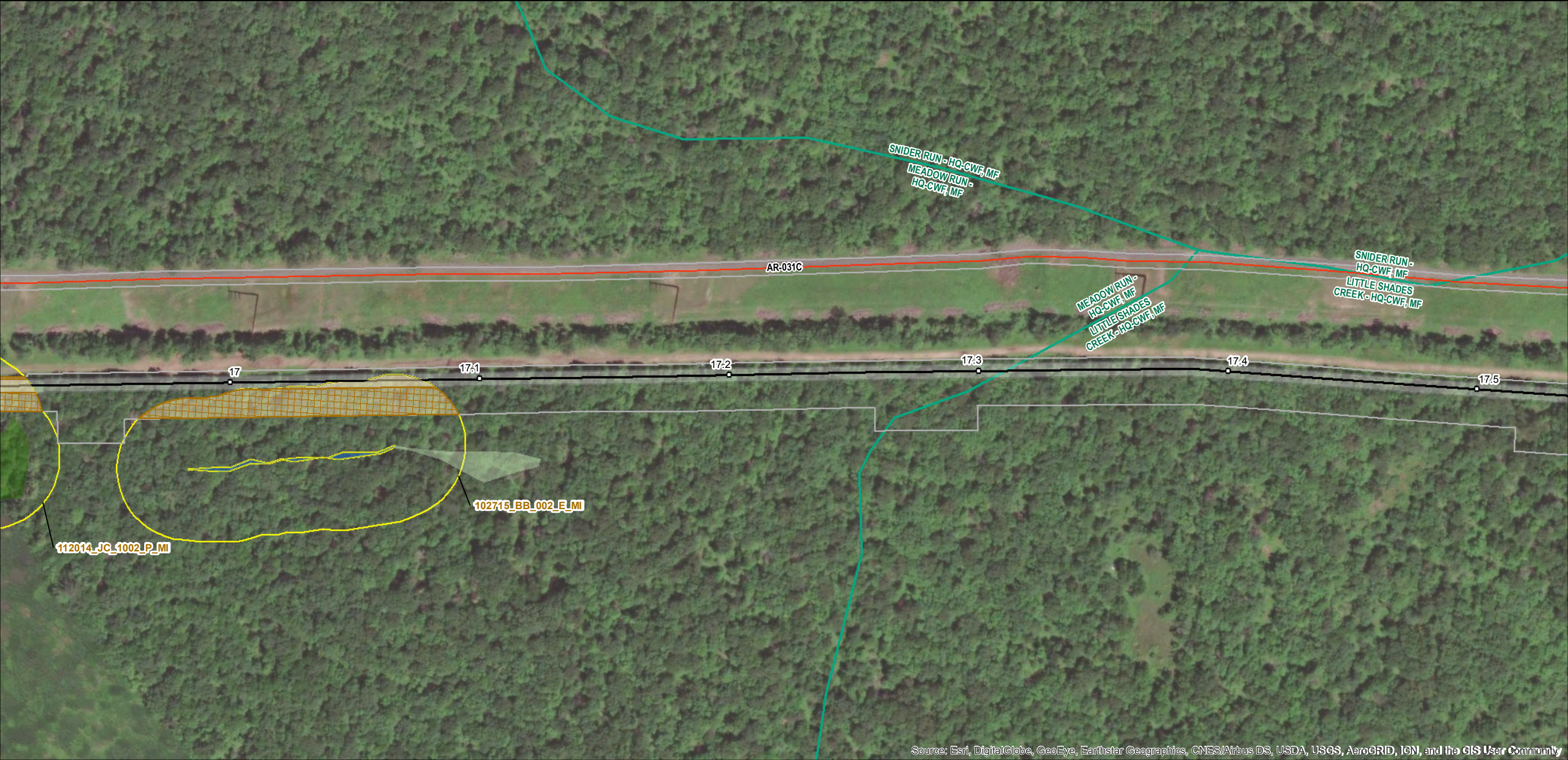


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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BEAR CREEK TWP, LUZERNE, PA



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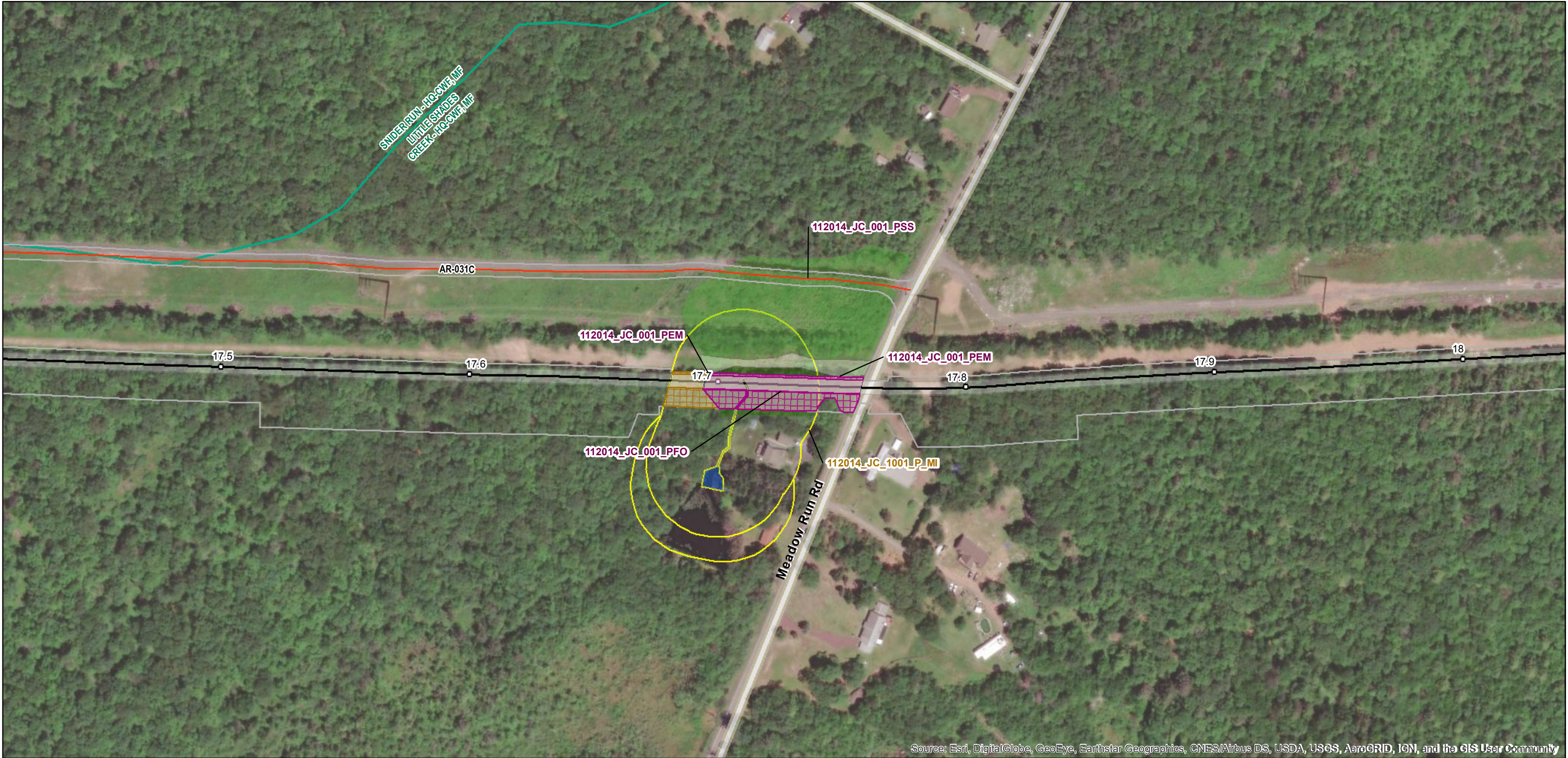


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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BEAR CREEK TWP, LUZERNE, PA



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Date: 10/11/2019

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BEAR CREEK TWP, LUZERNE, PA



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BEAR CREEK TWP, LUZERNE, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
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- 100-Foot Riparian Buffer
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- Riparian Planting
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BEAR CREEK TWP, LUZERNE, PA



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BEAR CREEK TWP, LUZERNE, PA



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BEAR CREEK TWP, LUZERNE, PA



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BEAR CREEK TWP, LUZERNE, PA



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BEAR CREEK TWP, LUZERNE, PA



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BEAR CREEK TWP, LUZERNE, PA



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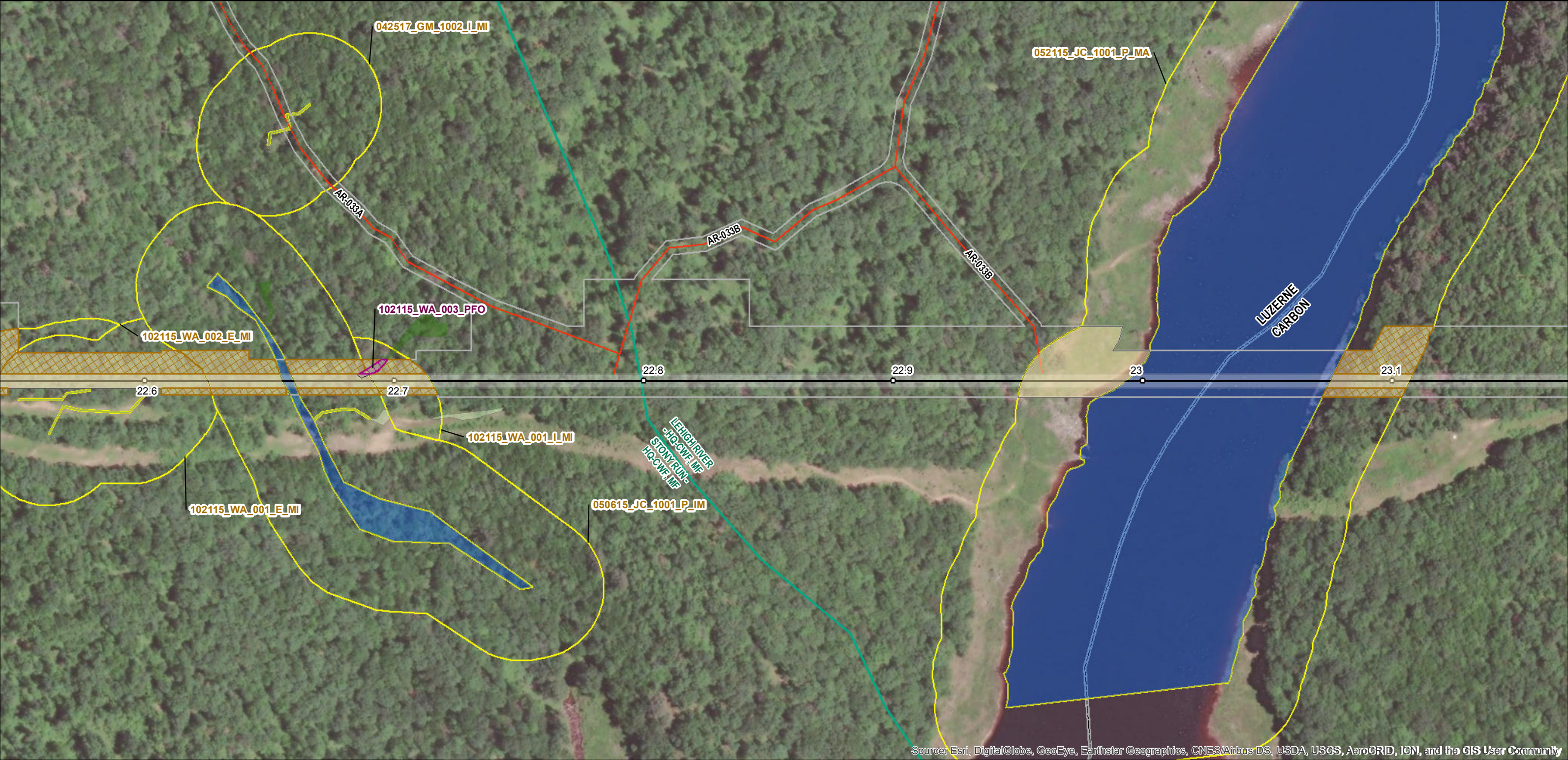


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BEAR CREEK TWP, LUZERNE, PA



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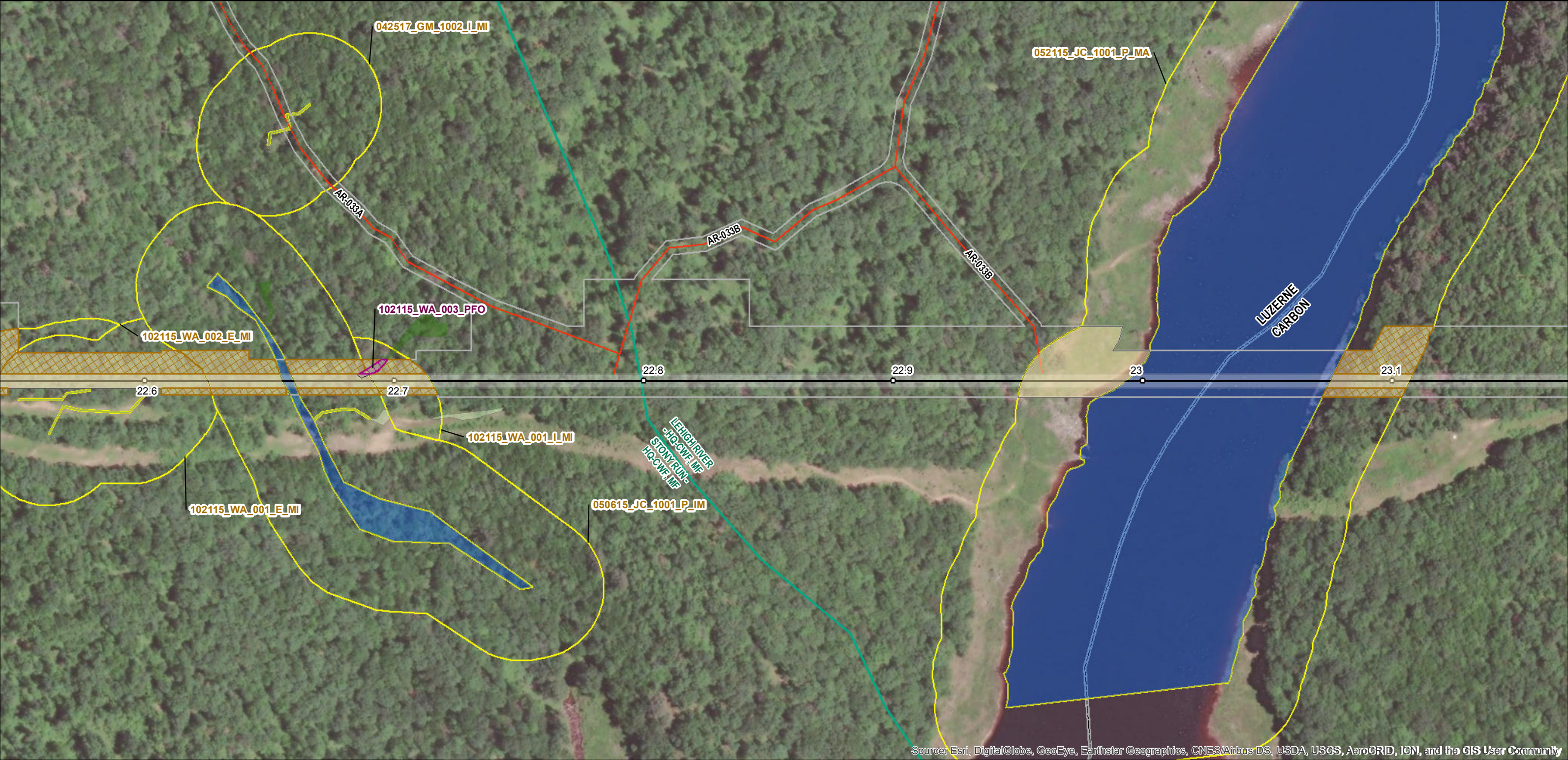


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BEAR CREEK TWP/KIDDER TWP,
LUZERNE/CARBON, PA



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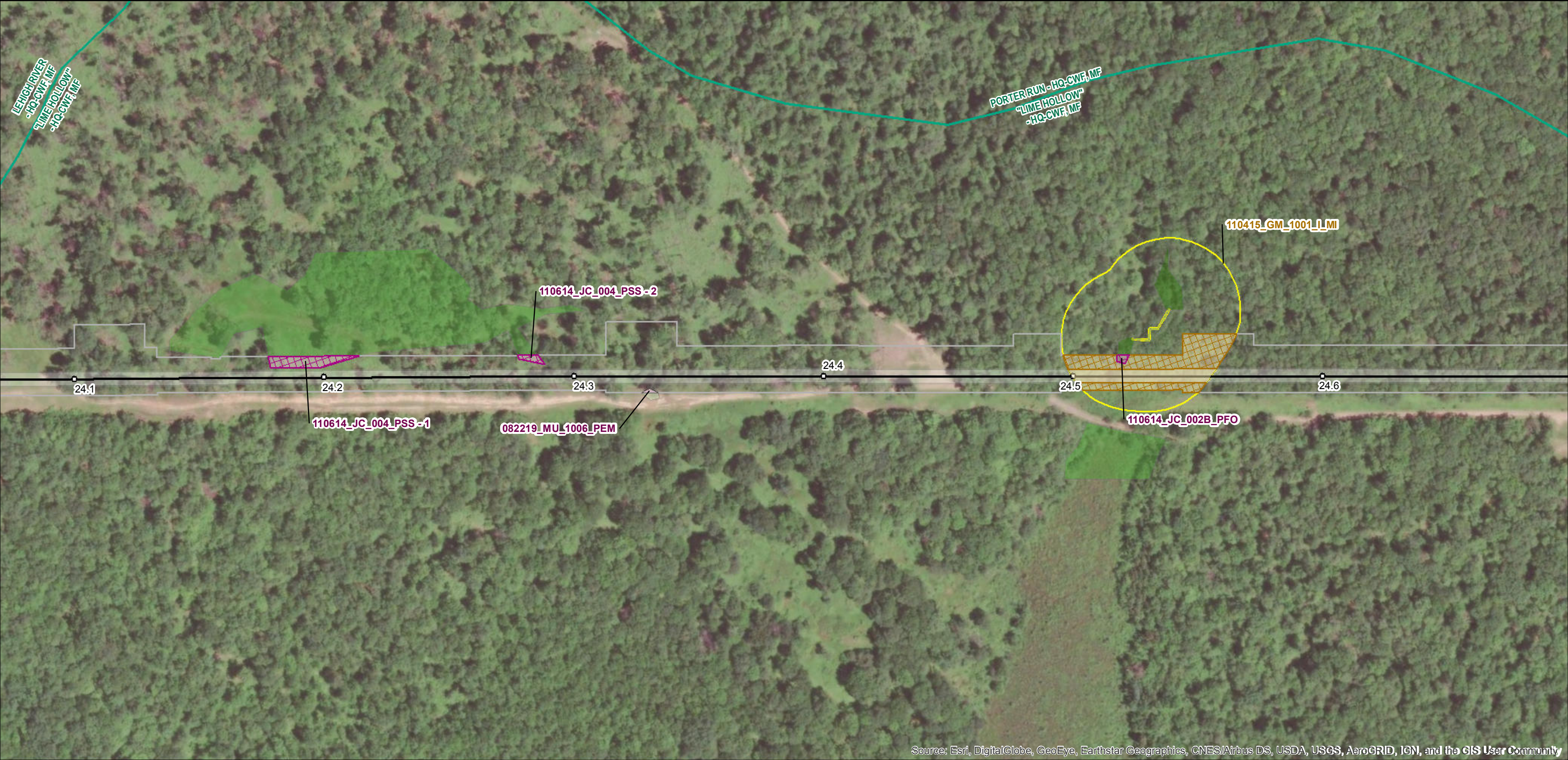


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BEAR CREEK TWP/KIDDER TWP,
LUZERNE/CARBON, PA



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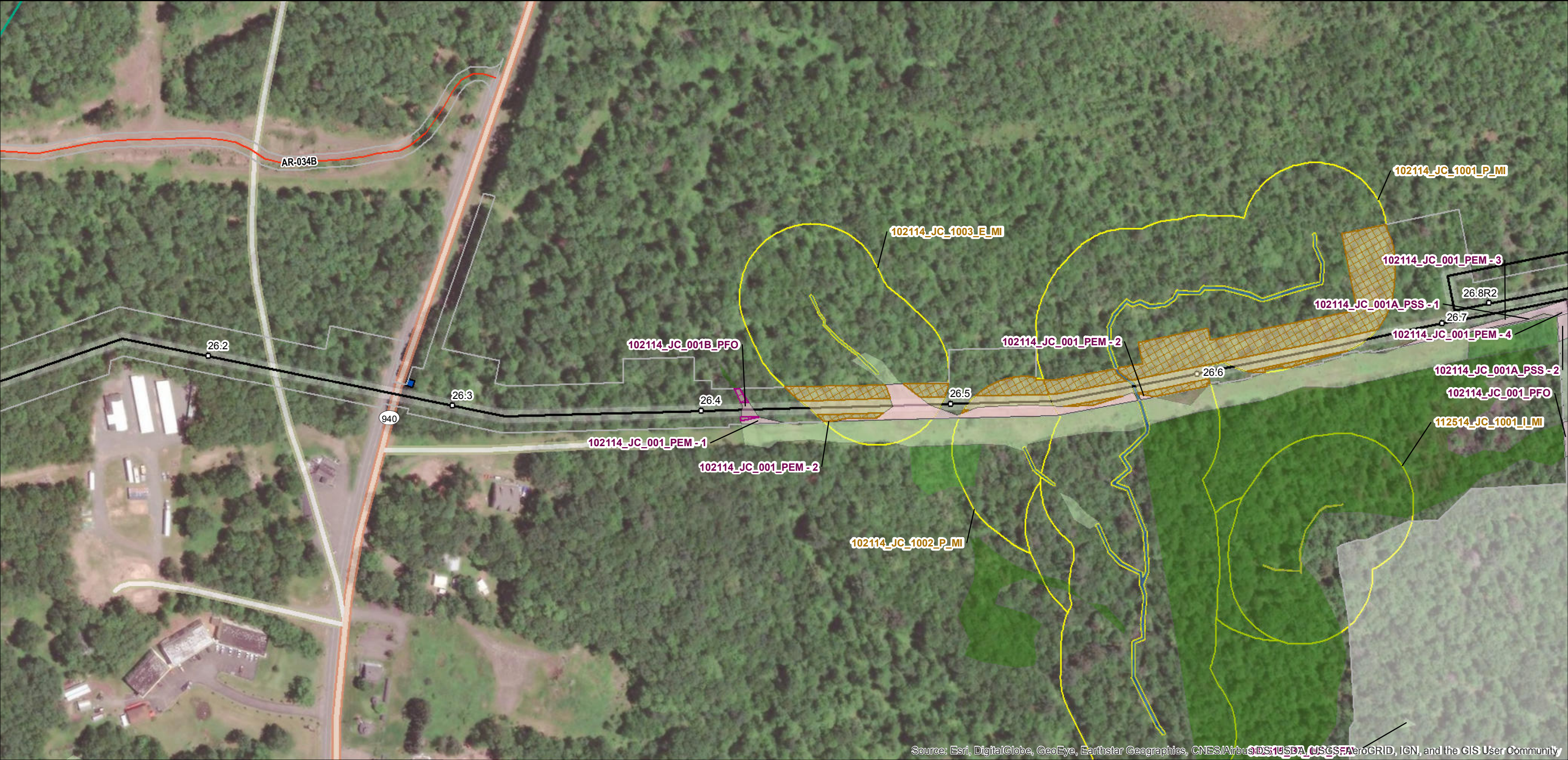


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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KIDDER TWP, CARBON, PA



Legend

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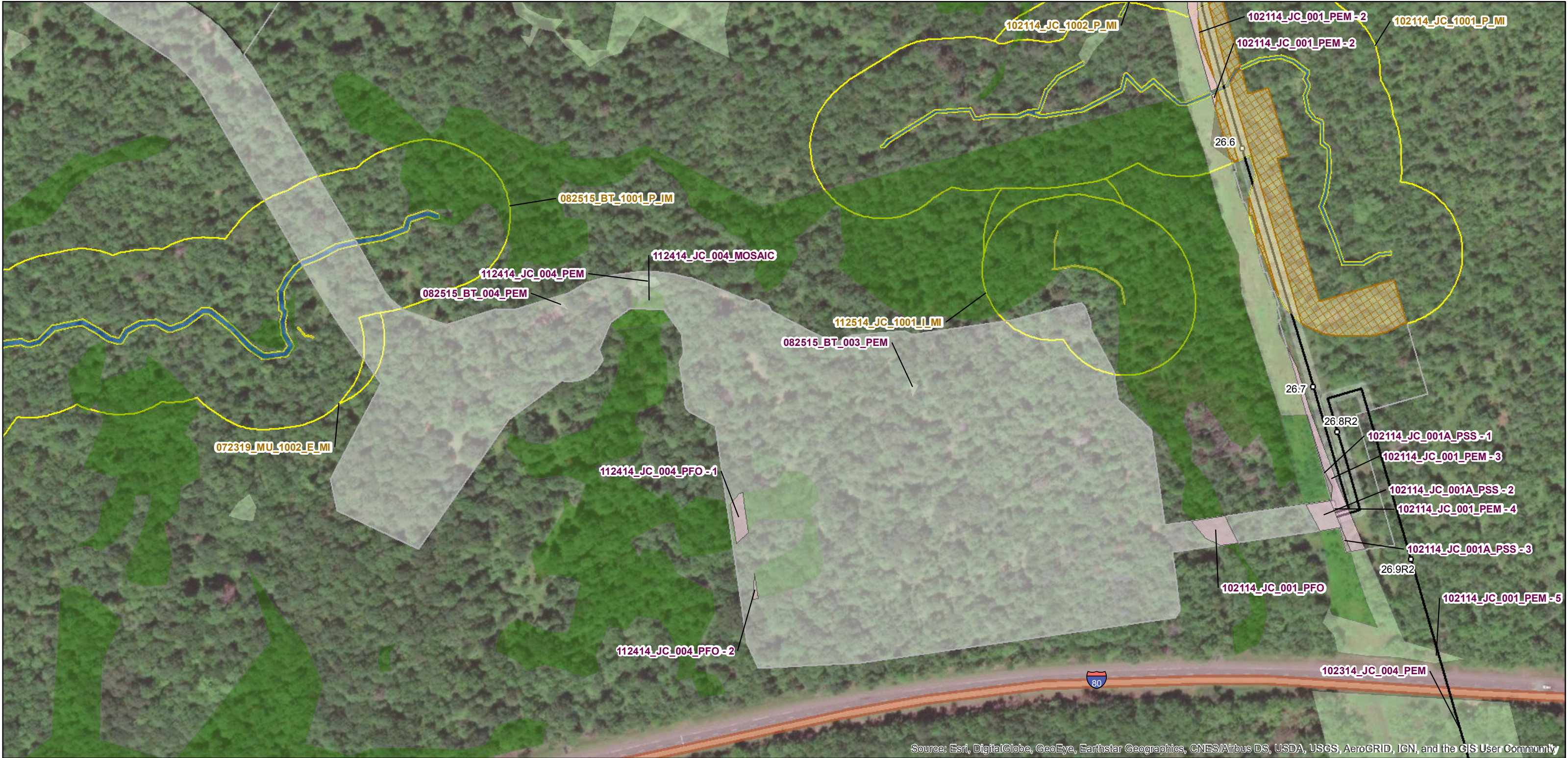


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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KIDDER TWP, CARBON, PA



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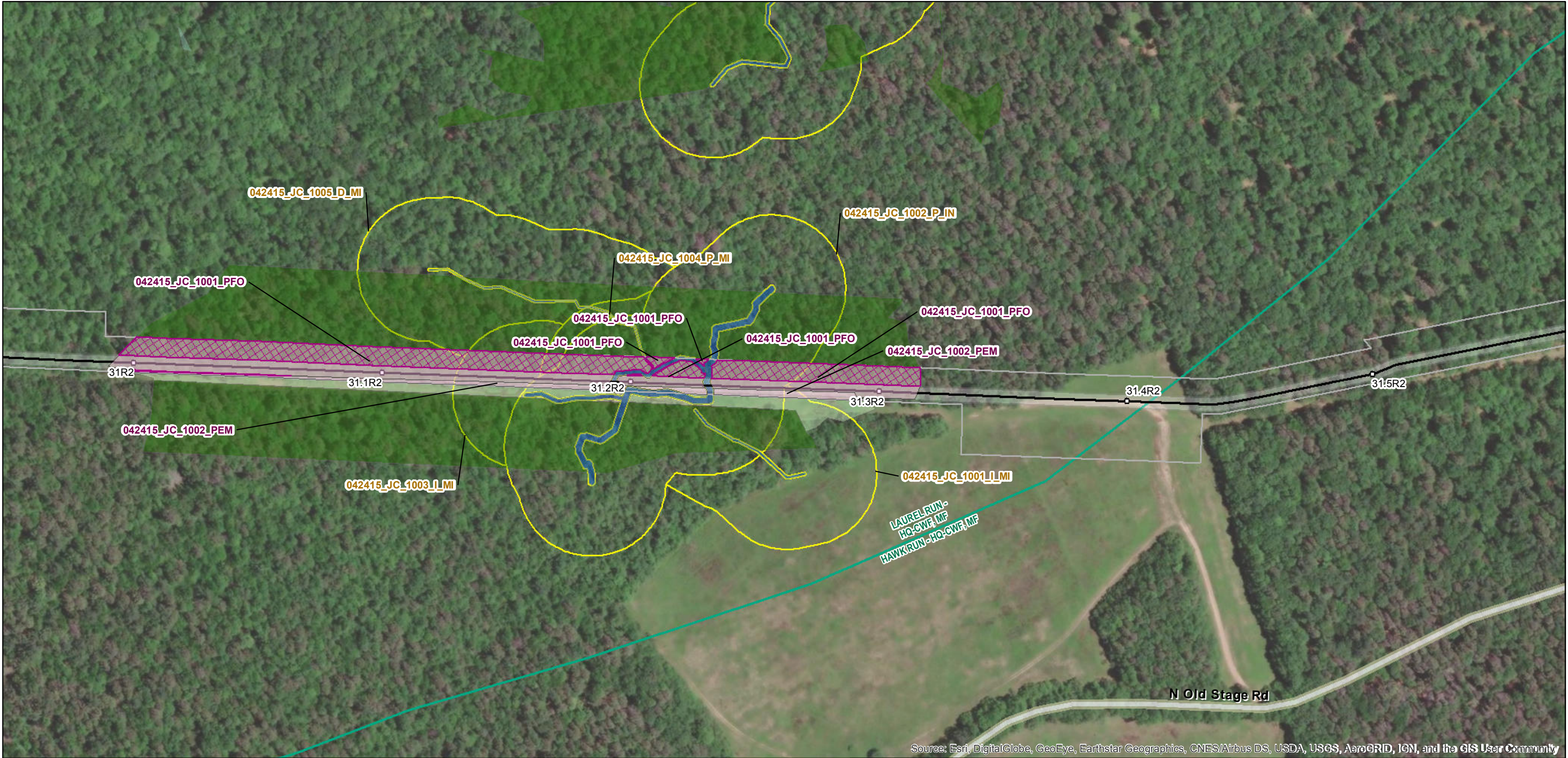


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KIDDER TWP, CARBON, PA



Legend

○ Milepost	■ Existing Culvert	□ 100-Foot Riparian Buffer
— Pipeline Centerline	■ Watercourse	□ 150-Foot Riparian Buffer
— Access Road Centerline	■ PEM	■ Riparian Planting
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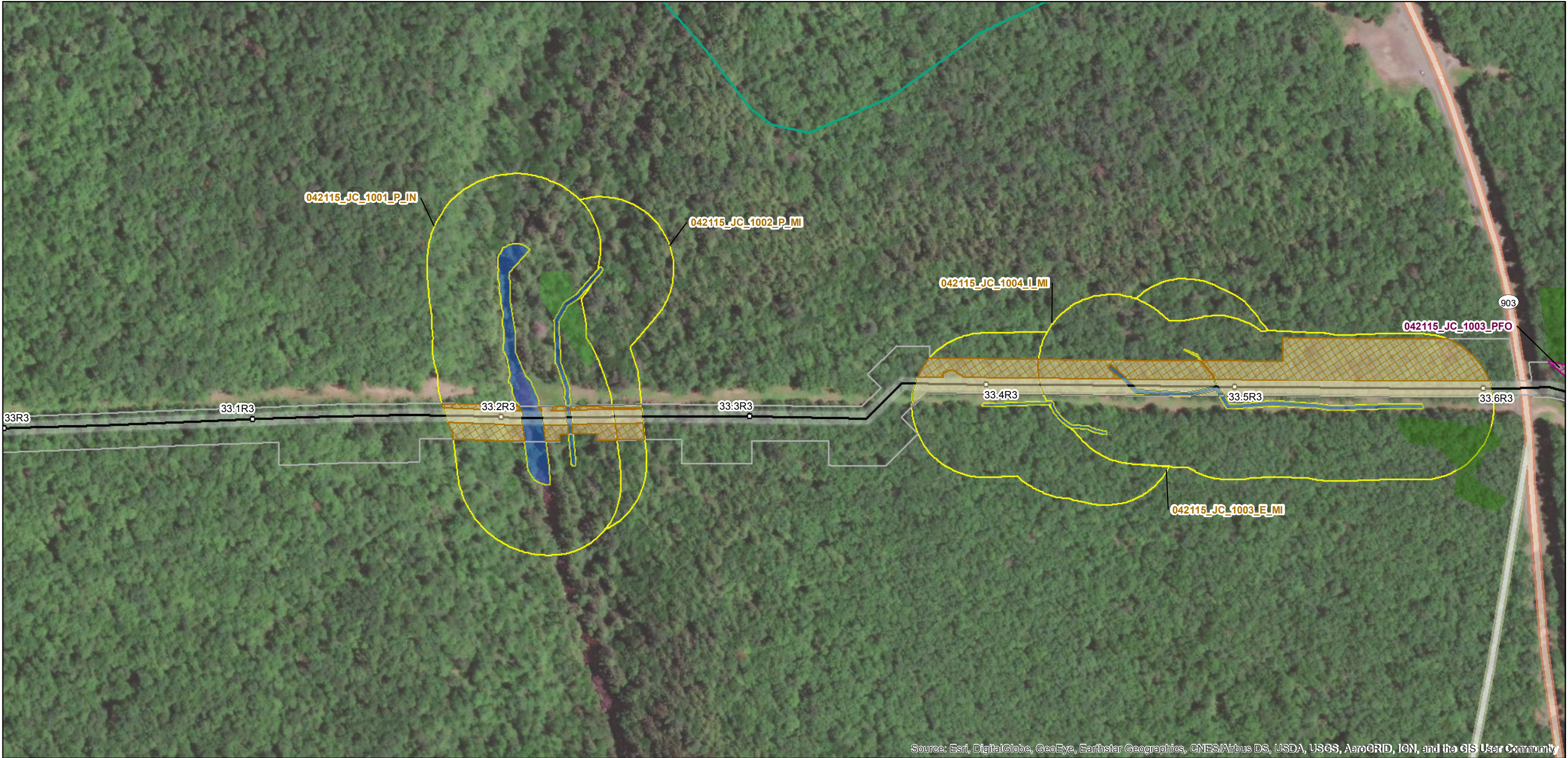


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- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
- POW

- 100-Foot Riparian Buffer
- 150-Foot Riparian Buffer
- Riparian Planting
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- Wetland Seeding
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KIDDER TWP/PENN FOREST TWP, CARBON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
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- PSS
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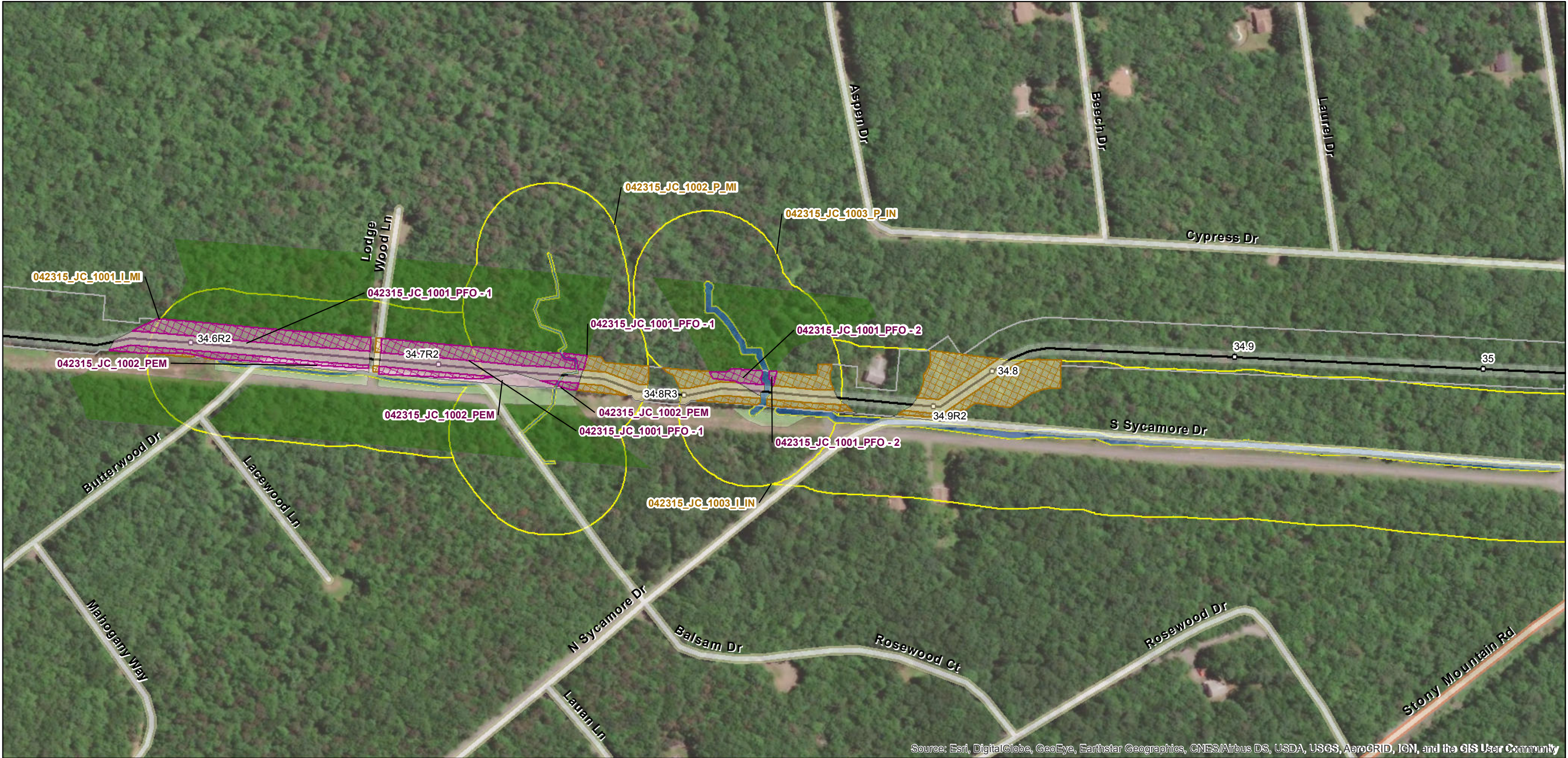


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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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PENN FOREST TWP, CARBON, PA



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PENN FOREST TWP, CARBON, PA



Legend

- Milepost
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PENN FOREST TWP, CARBON, PA



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Legend

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- ▨ Wetland Planting
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PENN FOREST TWP, CARBON, PA



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- Limits of Disturbance
- County Boundary

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- Watercourse
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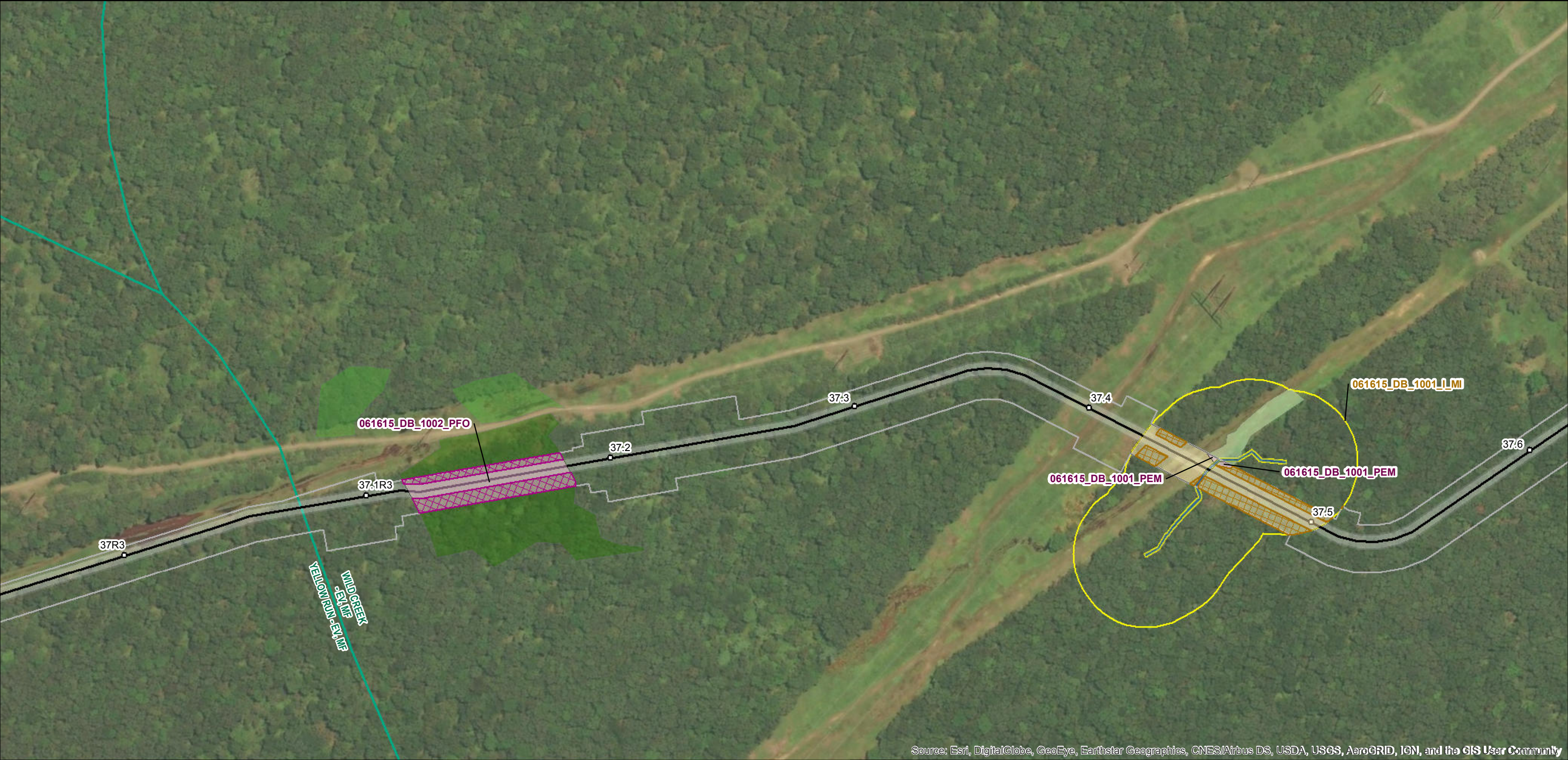


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Date: 10/11/2019

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PENN FOREST TWP, CARBON, PA



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Date: 10/11/2019

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PENN FOREST TWP, CARBON, PA



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Legend

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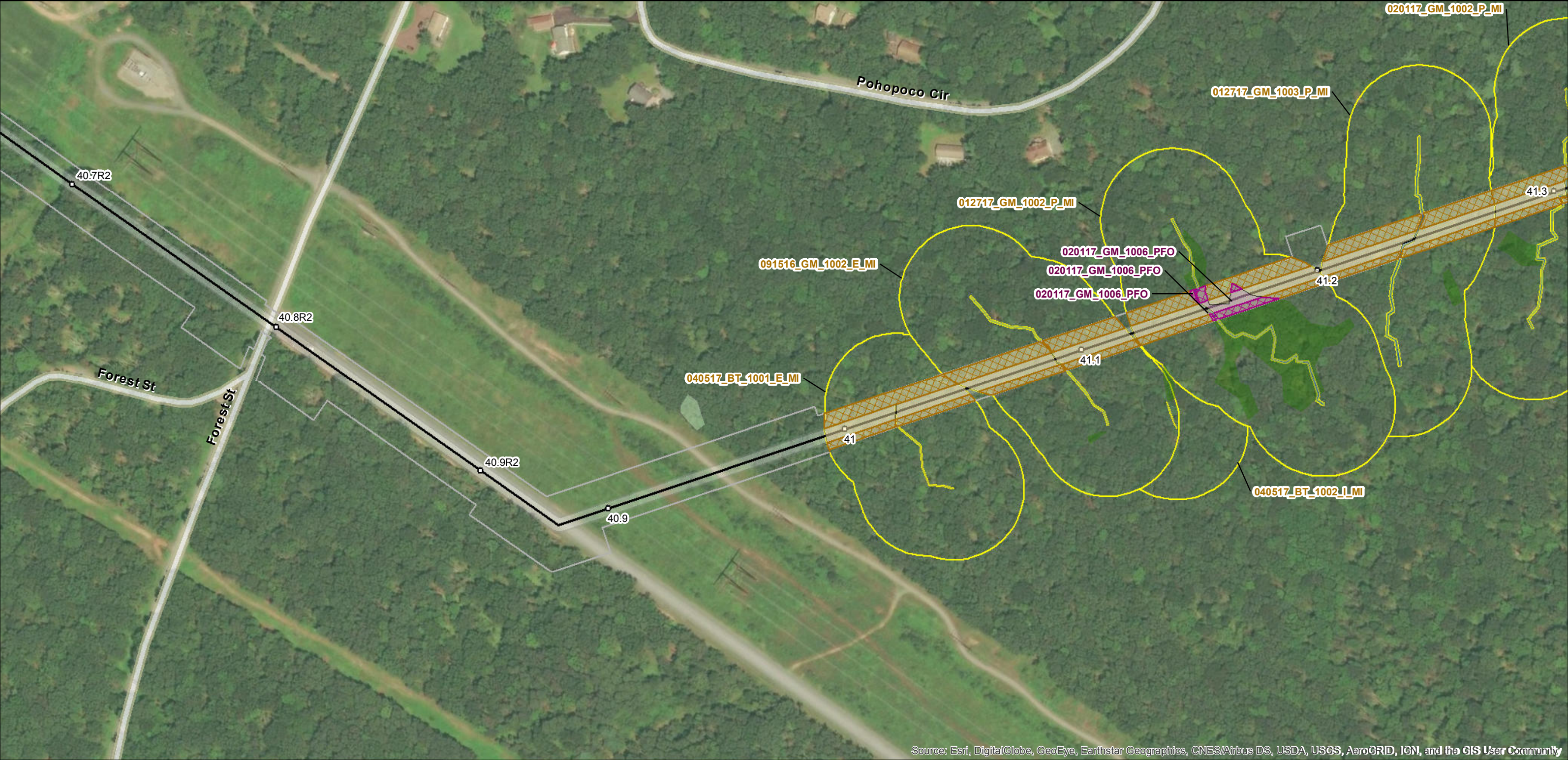


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

PENN FOREST TWP, CARBON, PA

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Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
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- Aboveground Facility Permanent Easement
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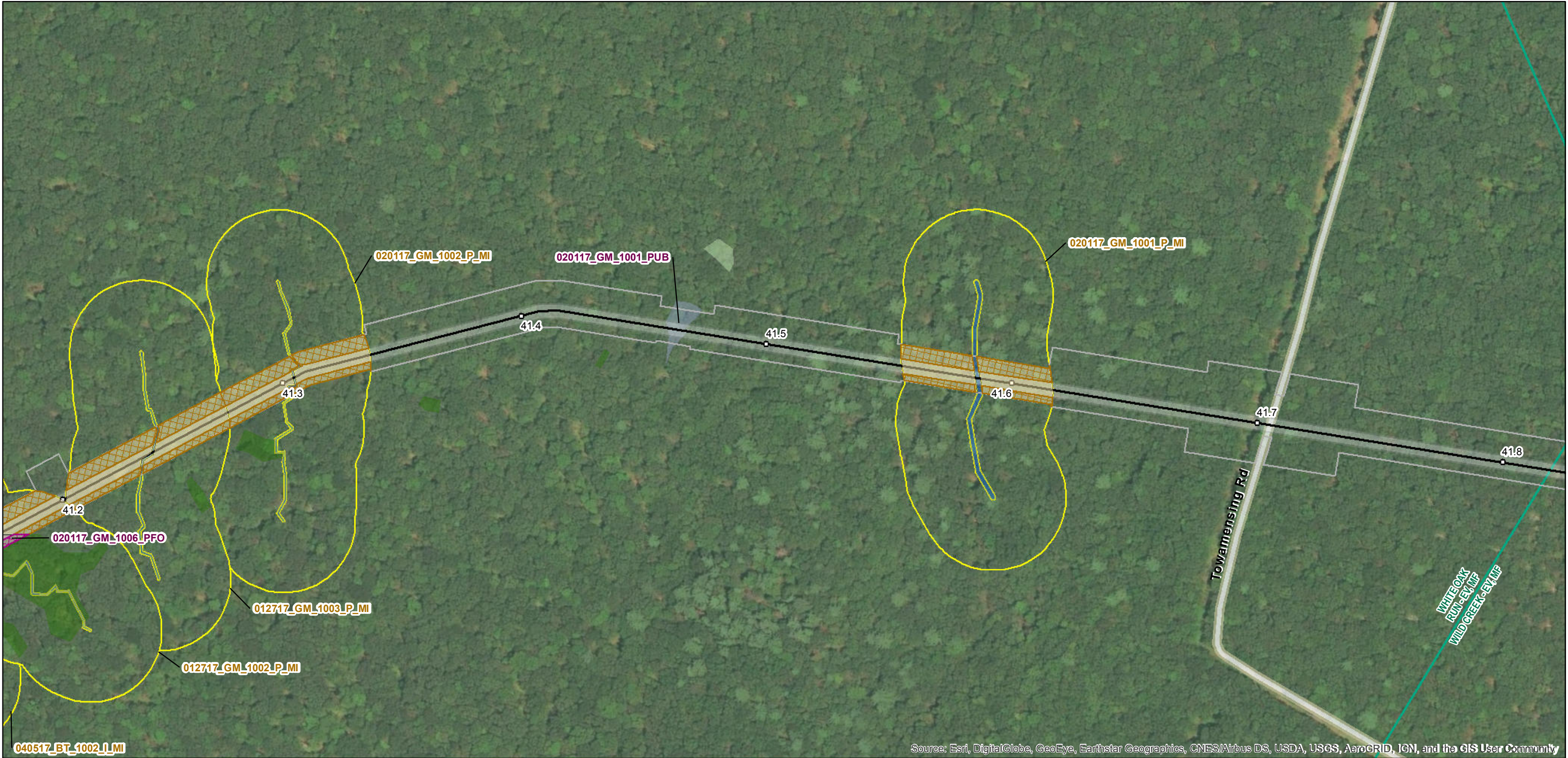


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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PENN FOREST TWP/TOWAMENSING TWP,
CARBON, PA



Legend

○ Milepost	■ Existing Culvert	□ 100-Foot Riparian Buffer
— Pipeline Centerline	■ Watercourse	□ 150-Foot Riparian Buffer
— Access Road Centerline	■ PEM	■ Riparian Planting
■ Maintained 30-ft ROW	■ PFO	■ Wetland Planting
■ Aboveground Facility	■ PFO Mosaic (50/50)	■ Wetland Seeding
■ Permanent Easement	■ PSS	■ Riparian Seeding
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■ County Boundary	■ PUB	
	■ POW	

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0 100 200 400 600 Feet



PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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TOWAMENSING TWP, CARBON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

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TOWAMENSING TWP, CARBON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

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TOWAMENSING TWP, CARBON, PA



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TOWAMENSING TWP, CARBON, PA



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TOWAMENSING TWP, CARBON, PA



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LOWER TOWAMENSING TWP, CARBON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
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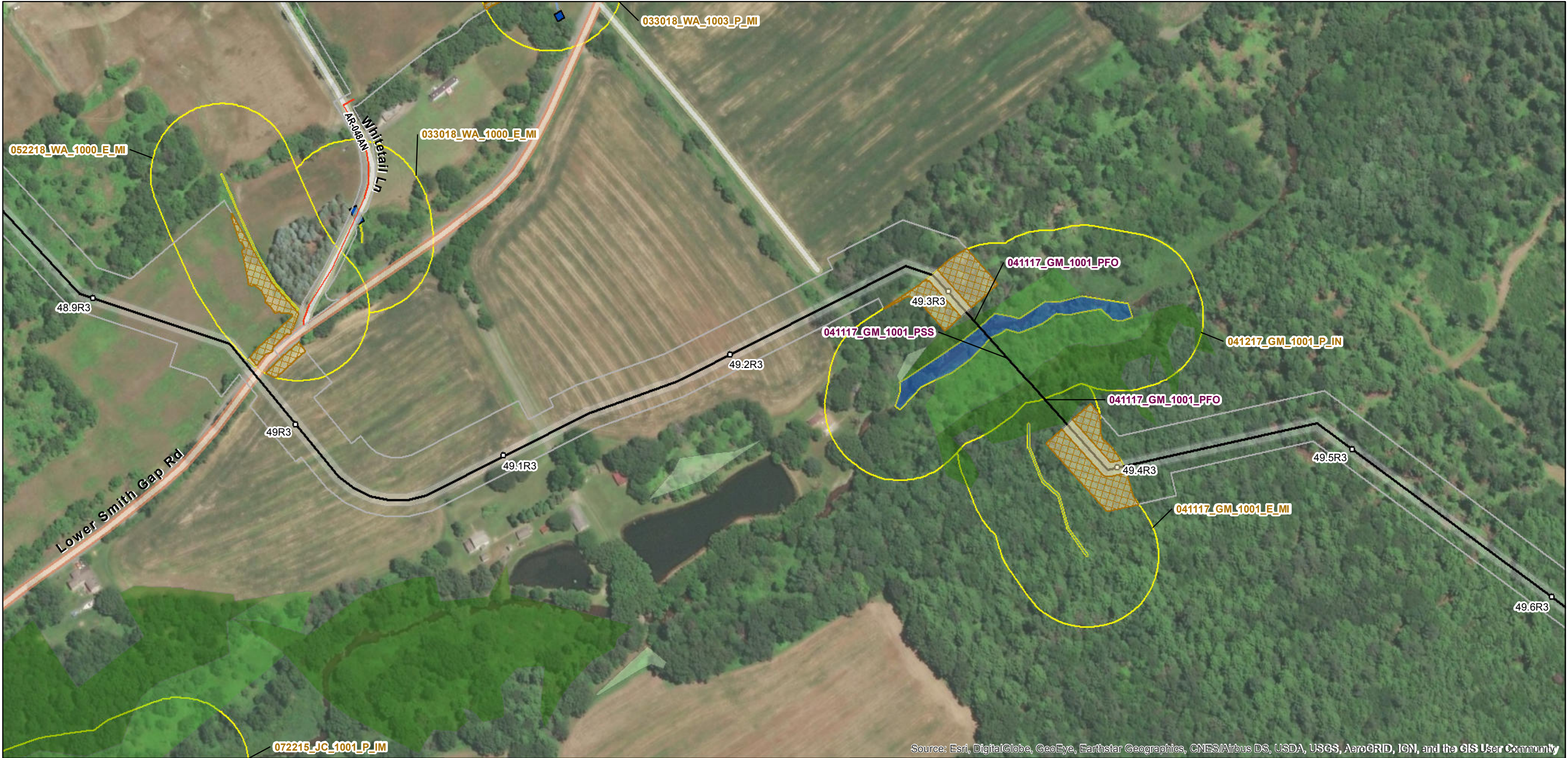


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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LOWER TOWAMENSING TWP, CARBON, PA



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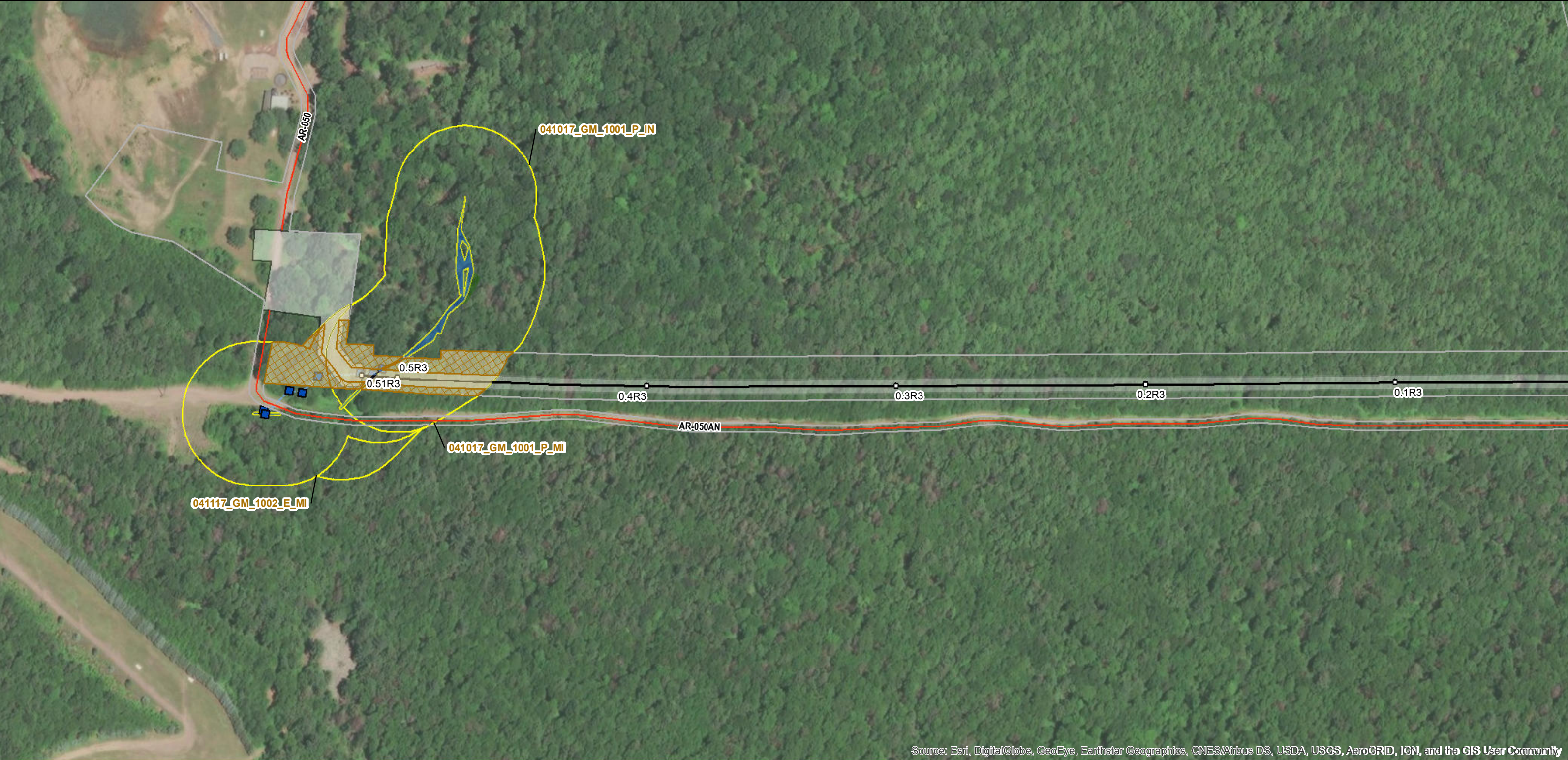


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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LOWER TOWAMENSING TWP, CARBON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
- POW

- 100-Foot Riparian Buffer
- 150-Foot Riparian Buffer
- Riparian Planting
- Wetland Planting
- Wetland Seeding
- Riparian Seeding
- Chapter 93 Designated Watershed

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LOWER TOWAMENSING TWP, CARBON, PA



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Legend

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- Limits of Disturbance
- County Boundary

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- Watercourse
- PEM
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- PSS
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LOWER TOWAMENSING TWP/ELDRED TWP,
CARBON/MONROE, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
- POW

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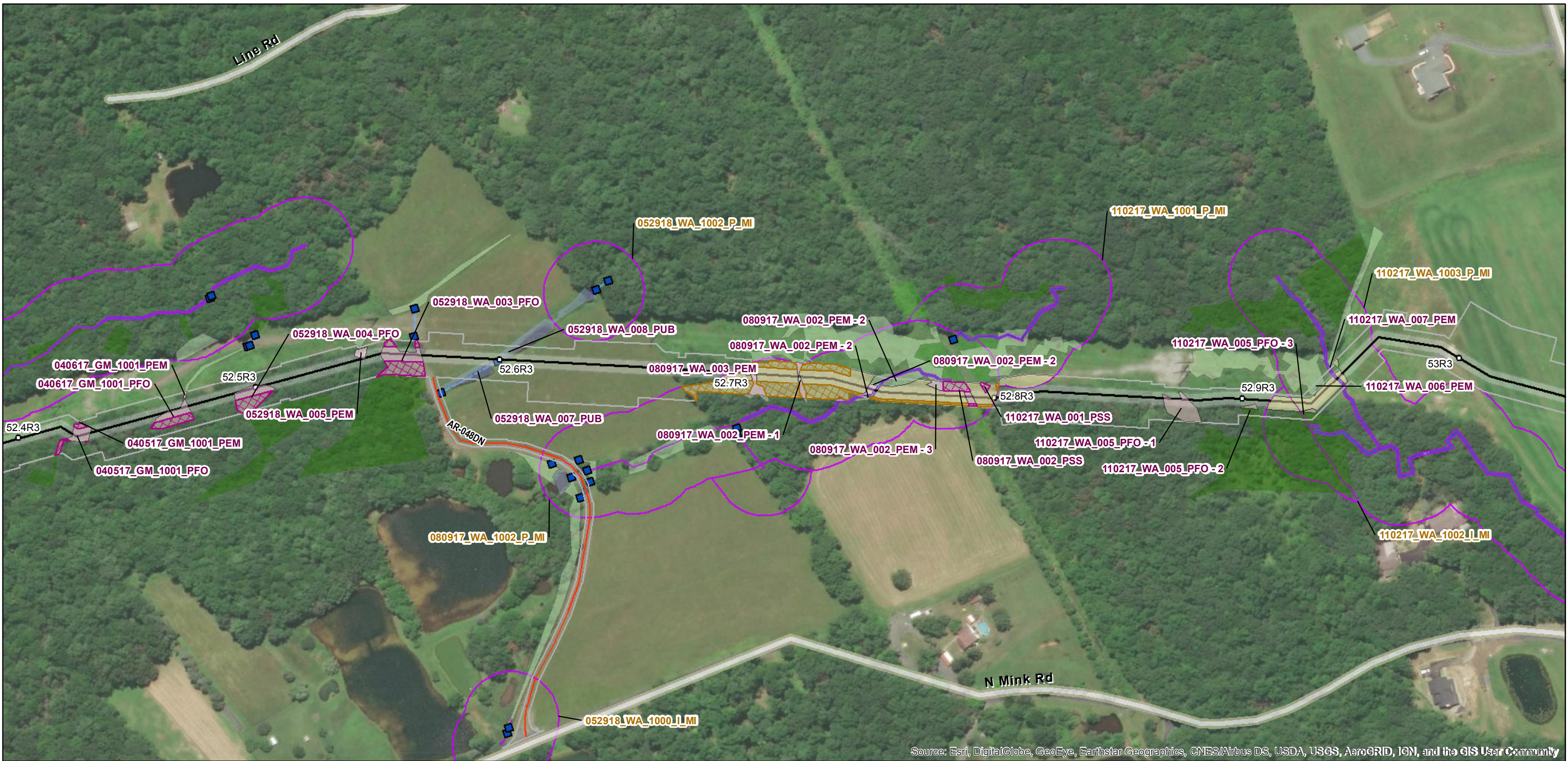


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LOWER TOWAMENSING TWP / ELDRED TWP,
CARBON / MONROE, PA



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Legend

- Milepost
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- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
- POW

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MOORE TWP, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
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- PUB
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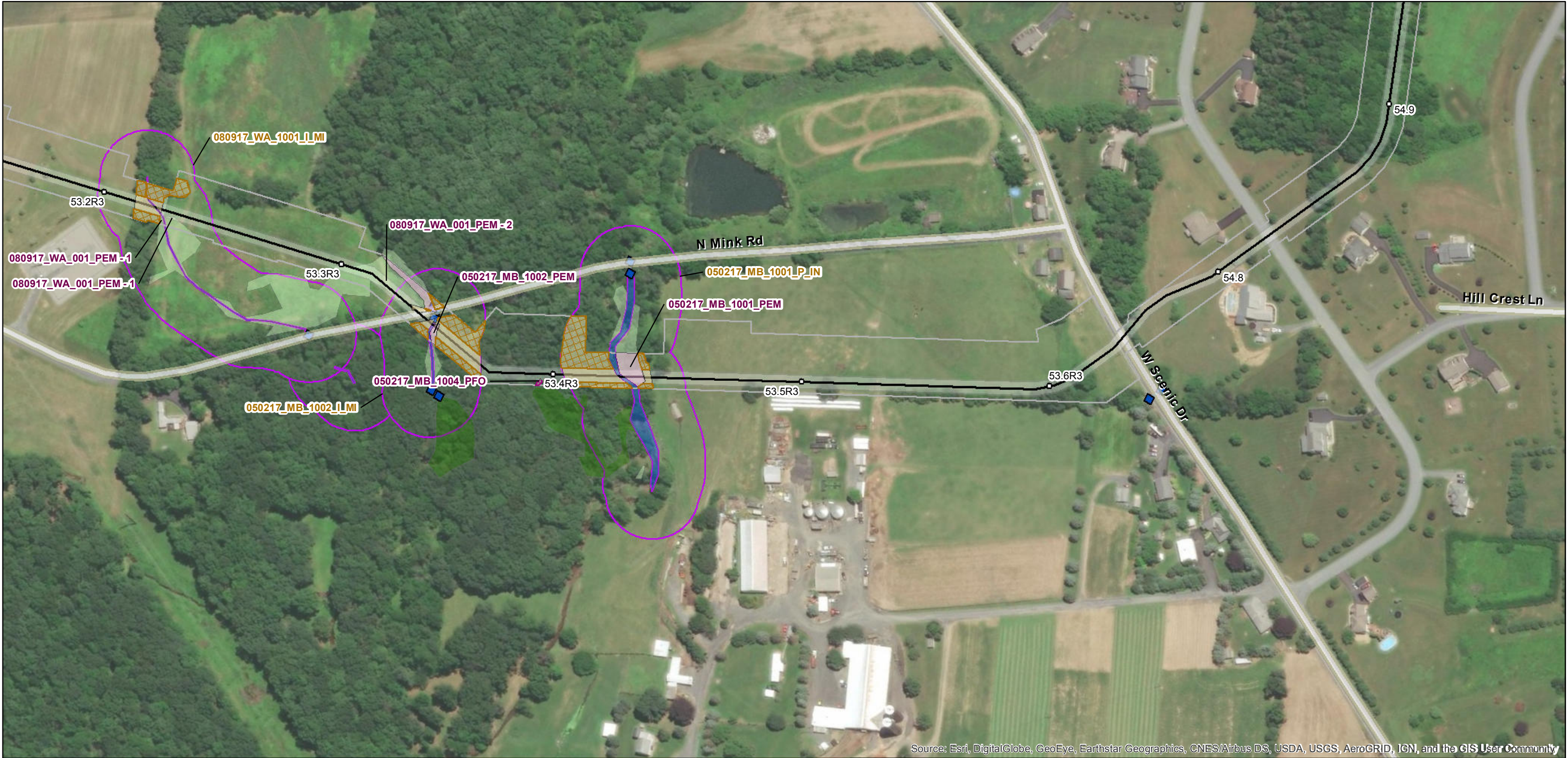


PennEast Pennsylvania Wetland and Riparian Reforestation Plan

Date: 10/11/2019

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MOORE TWP, NORTHAMPTON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- ▭ Maintained 30-ft ROW
- ▭ Aboveground Facility Permanent Easement
- ▭ Limits of Disturbance
- ▭ County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
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- PSS
- Vernal Pool
- PUB
- POW

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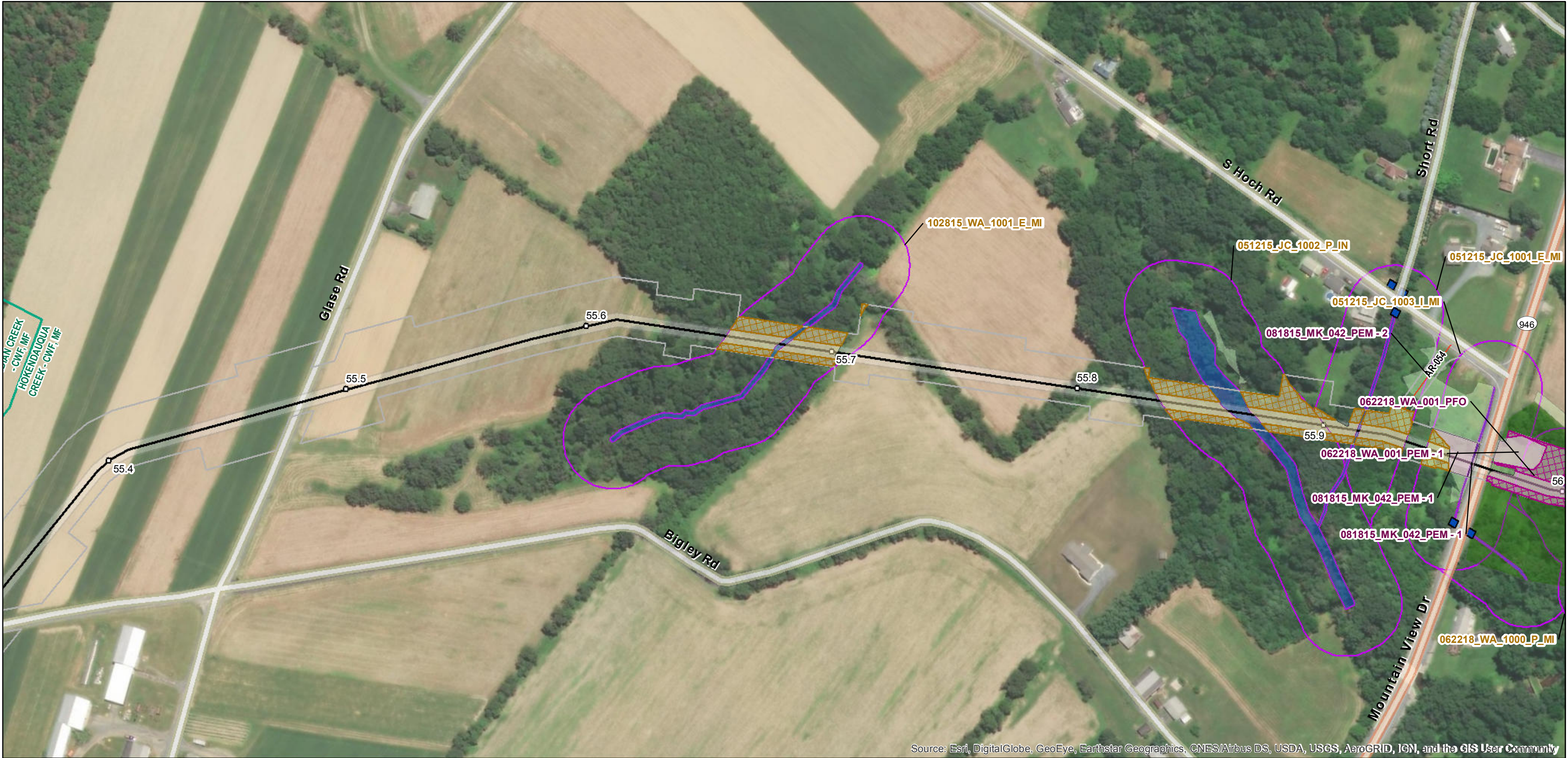


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MOORE TWP, NORTHAMPTON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- ▭ Maintained 30-ft ROW
- ▭ Aboveground Facility Permanent Easement
- ▭ Limits of Disturbance
- ▭ County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
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- PUB
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MOORE TWP, NORTHAMPTON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
- County Boundary

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MOORE TWP, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
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- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

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Date: 10/11/2019

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MOORE TWP, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
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- PFO Mosaic (50/50)
- PSS
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Date: 10/11/2019

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MOORE TWP, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
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- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

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- Watercourse
- PEM
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MOORE TWP, NORTHAMPTON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
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PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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MOORE TWP, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

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PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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MOORE TWP, NORTHAMPTON, PA



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Legend

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PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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EAST ALLEN TWP/BATH BORO, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
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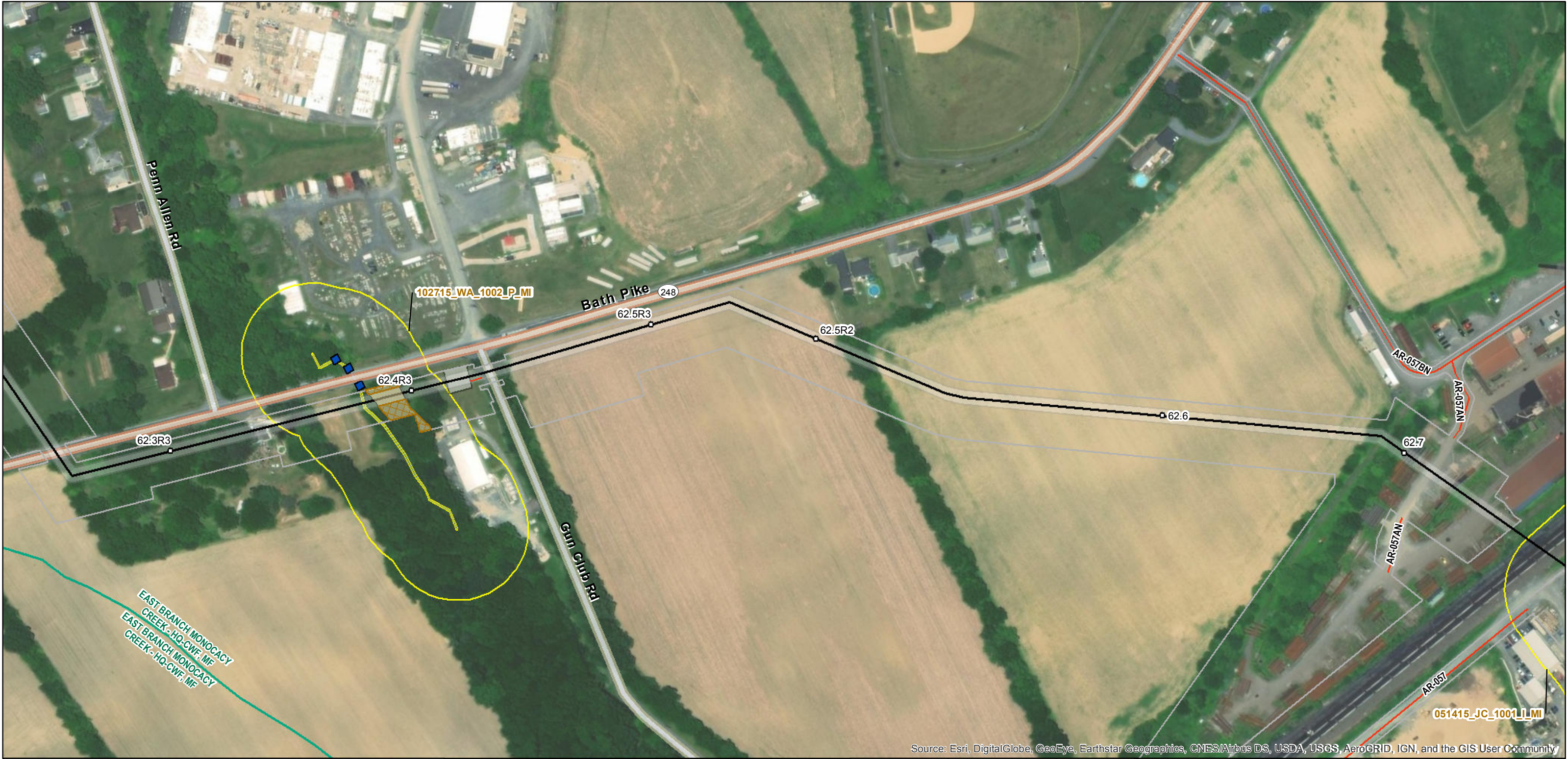


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EAST ALLEN TWP/BATH BORO/UPPER NAZARETH TWP, NORTHAMPTON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
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UPPER NAZARETH TWP, NORTHAMPTON, PA



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

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- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility
- Permanent Easement
- Limits of Disturbance
- County Boundary

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- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
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- PUB
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PennEast Pennsylvania Wetland and Riparian Reforestation Plan

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UPPER NAZARETH TWP, NORTHAMPTON, PA



Legend

- Milepost
- Pipeline Centerline
- Access Road Centerline
- Maintained 30-ft ROW
- Aboveground Facility Permanent Easement
- Limits of Disturbance
- County Boundary

- Existing Culvert
- Watercourse
- PEM
- PFO
- PFO Mosaic (50/50)
- PSS
- Vernal Pool
- PUB
- POW

- 100-Foot Riparian Buffer
- 150-Foot Riparian Buffer
- Riparian Planting
- Wetland Planting
- Wetland Seeding
- Riparian Seeding
- Chapter 93 Designated Watershed

Notes:

- See planting schedule on Notes and Details sheets.
- If alternative restoration arrangements have been agreed upon with the landowner or land manager, the alternative restoration plan will be used.
- Wetland and riparian restoration is not proposed in agricultural, residential, or commercial/industrial areas.
- Wetland and riparian restoration is not proposed along existing access roads. If any access roads are widened during construction and will be restored after construction, an appropriate seed mix will be used for stabilization in accordance with the approved erosion and sediment control plan.

References:

- County Boundaries, Chapter 93 Designated Use and Existing Use Streams, Small Watersheds (PASDA) Restoration of Environmental Features 9-13-2019
- IFC Workspace 9-05-2019
- ESRI Aerial Imagery, 2016



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UPPER NAZARETH TWP/LOWER NAZARETH TWP, NORTHAMPTON, PA