

Impacts of the
Proposed PennEast Pipeline
on Exceptional Value Wetlands
in Pennsylvania

Prepared for: The Delaware Riverkeeper Network
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BACKGROUND

PennEast Pipeline Company, LLC (PennEast) proposes to construct, install, and operate approximately 115 miles of 36-inch diameter natural gas pipeline from Luzerne County, Pennsylvania to Mercer County, New Jersey. Of that total, 77.3 miles (approximately two-thirds) are proposed in Pennsylvania. Also proposed is an approximately 2.1-mile long 24-inch diameter pipeline in Northampton County, PA (the Hellertown Lateral) and a 0.5-mile 4-inch diameter pipeline (Blue Mountain Lateral).

The proposed PennEast pipeline route reportedly has been revised 8 times since the design of the original route. Prior to the current revision, the most recent alignment was proposed in September 2016. The current project is detailed in plans and reports posted online by PADEP on its Pennsylvania Pipeline Portal¹, in accordance with notices for Chapter 102 and 105 permit applications published in the *Pennsylvania Bulletin* on 16 February 2019. The latest changes, designated by the notation “R3” at affected milepost marks along the mapped route, involve a total of approximately 15.9 miles. Seven segment alignments are proposed to be changed in Luzerne County (2.8 miles total), five in Carbon and Monroe Counties (7.1 miles total), and five in Northampton County (6.0 miles total).

On behalf of the Delaware Riverkeeper Network (DRN), Schmid & Company has reviewed available project files regarding wetland delineations and impact assessments for the Pennsylvania portion of the currently-proposed project. Our current review involved no new field inspections. Our primary focus was on the accuracy of the applicant's mapped wetlands along the pipeline route in terms of their location, size, physical characteristics, classification as Exceptional Value Wetlands, and potential for impact. Our previous review for DRN, which included selected field inspections (Schmid & Company, Inc., July 2016), examined the PennEast project details associated with a Section 401 Water Quality Certification application to PADEP as noticed in the *Pennsylvania Bulletin* on 14 May 2016.

REVIEW AND ANALYSIS

When Schmid & Company last examined the PennEast pipeline project for DRN, wetland field delineations had not been completed by the applicant for more than 19 miles of the proposed right-of-way (ROW) in Pennsylvania. NWI (National Wetlands Inventory) maps were used by the applicant as a substitute for onsite investigation in those areas. PennEast asserts that 100% of the current pipeline ROW in Pennsylvania now has been field-investigated for wetland delineations, and that appears to be the case.

The number of wetland impacts associated with the current PennEast alignment appears to have increased significantly since our 2016 review. We do not know whether the increase is a result of alignment revisions, more detailed field-delineations in areas previously not investigated, both, and/or other factors. The overall change in wetland impacts from the Pennsylvania section of the PennEast project is summarized below:

¹ <https://www.dep.pa.gov/Business/ProgramIntegration/Pennsylvania-Pipeline-Portal/Pages/PennEast.aspx>

**APPLICANT-ACKNOWLEDGED WETLAND IMPACTS (#s)
Pennsylvania Section of the PennEast Pipeline**

	<u>Exceptional Value Wetlands</u>	<u>Other Wetlands</u>	<u>Total</u>
July 2016 Review	54	46	100
Current 2019 Review	116	52	168

The increase in the number of applicant-reported wetland impacts is concerning, especially since there are likely to be additional wetlands --- and wetland impacts --- that have not yet been identified or acknowledged. It appears that there are areas along the proposed pipeline route that are very likely to contain wetlands, based on available mapped information, but have not been so identified by the applicant. For example, between Mileposts 63.5 and 63.6R2 in Northampton County (Figure 1), there is a corridor of poorly drained hydric soil (mapped “Ho”, Holly silt loam). Hence this area of hydric soil surrounds a perennial stream which *is* identified by the applicant. The stream is a designated trout water, and the riparian area of mapped hydric soil is wooded according to the aerial photograph. This area appears likely to be a forested (PFO) exceptional value wetland. Until there has been agency review of the field delineation of all of the applicant’s wetlands, we are not willing to accept that all aquatic resources at risk of damage from the proposed pipeline have been accurately identified. The under-identification and mischaracterization of wetlands are recurrent problems associated with large linear projects in Pennsylvania (Schmid 2019).

There is no excuse for inaccurate identification of wetlands on any project site, yet it happens more often than necessary, even where the wetland consultants have "appropriate" credentials and claim to have followed the relevant federal and state criteria and guidelines for wetland delineation. The Army Corps of Engineers has an established, straightforward, no-fee process/procedure (known as a jurisdictional determination, or JD) for checking the accuracy of wetland delineations for federal regulatory purposes. Inasmuch as PADEP uses the same methodology (25 Pa. Code 105.451), a Corps JD also can serve to verify the accuracy of wetland delineations for Commonwealth regulatory purposes.

For the PennEast Pipeline project, it is imperative that the Corps field inspect and confirm the accuracy of the applicant’s proposed, but apparently incomplete, delineation of all wetlands. The importance of Corps of Engineers review was highlighted recently when a proposed coal mine application was undergoing PADEP permit review (Schmid & Company, Inc. 2014). In the 1,867-acre surface facilities area for the proposed mine in southwestern Pennsylvania, the applicant's wetland consultant identified 16 wetlands where the National Wetlands Inventory (NWI) had mapped only 2, a result which would seem to be more comprehensive. Following the Corps' JD field inspections, however, a total of 44 wetlands was confirmed at the mine site. If the Corps had not examined the consultant's wetland delineations, and if any of those additional 28 wetlands had been adversely affected by the mining project, those impacts would not have been recognized or mitigated.

The classification of wetlands as “exceptional value” or “other” by this applicant is neither consistent nor credible. Of the 168 wetlands reportedly affected by the Pennsylvania section of the PennEast pipeline, 52 are designated “other” wetlands and 116 are classified as

“exceptional value” based on one or more of criteria “i” through “iv” listed in PA Code §105.17². The applicant’s classification of wetlands to be affected, by county, is listed in Table 1 below.

TABLE 1. Number of exceptional value wetlands (and their associated criteria) and “other” wetlands to be affected by the proposed PennEast pipeline, by county, according to the applicant.

<u>Wetland Classification, Number by County*</u>					
EV Criterion**	Bucks	Carbon	Luzerne	Northampton	Total
i, ii, or i and ii	0	0	0	0	0
iii	0	17	22	37	76
iv	0	0	1	0	1
iii and i	0	18	0	6	24
iii and ii	0	5	0	7	12
iii and iv	0	0	0	1	1
i, ii, and iii	0	2	0	0	2
Subtotal EV	0	42	23	51	116 (69%)
<i>“Other”</i> (non EV)	1	13	28	10	52 (31%)
Total Wetlands	1	55	51	61	168

* Note: No wetlands listed for Monroe County

**Classification criteria (as defined by PA Code §105.17) are:

- (i) Serves as habitat for fauna or flora listed as “threatened” or “endangered”
- (ii) Is hydrologically connected to or located within a 1/2-mile from habitat for fauna or flora listed as “threatened” or “endangered” and wetland dependent;
- (iii) Located in or along the floodplain of the reach or tributaries of a wild trout stream or along waters listed as exceptional value;
- (iv) Located along an existing public or private drinking water supply.

A wetland need only meet one criterion in order to be classified as “exceptional value”. It is significant, and a testament to the sensitivity of the areas through which this pipeline is proposed, that most (69%) of the wetlands to be affected by the PennEast project in Pennsylvania are acknowledged to be “exceptional value” wetlands. We believe it is likely that the number of exceptional value wetlands along the PennEast route actually is higher than the applicant currently acknowledges.

The most common basis for “exceptional value” wetland classification by PennEast is criterion “iii” (*located along a wild trout or EV water*); two-thirds (76) of the “exceptional value” wetlands to be impacted are so classified solely on the basis of criterion “iii”. Another 38 wetlands are classified by the applicant as “exceptional value” in part on the basis of an association with threatened or endangered species (criteria “i” and “ii”), in addition to criterion “iii”. Only two

² We agree that none of the pipeline route traverses a “natural” or “wild” area in any State Park or State Forest, and so the fifth criterion for exceptional value wetlands -- “v” -- in §105.17 is not applicable to the present alignment.

wetlands identified along the entire route are classified as “exceptional value” because of criterion “iv” (*located along an existing public or private drinking water supply*).

The Pennsylvania Groundwater Information System database (PAGWIS) reportedly was relied upon for identifying private wells near the proposed PennEast pipeline routes. PAGWIS is known to be a partial and incomplete dataset. The PAGWIS database currently available from PASDA (Pennsylvania Spatial Data Access) contains about 123,000 separate features statewide, yet it is estimated that there are more than 1 million private water wells across the Commonwealth. In our review of a different proposed pipeline project (Schmid & Company, Inc. 2017a) we found that PAGWIS identified less than 5 percent of the actual existing water wells located along that route in Westtown Township, Chester County. The PAGWIS database identifies about three dozen wells within 500 feet of the centerline of the proposed PennEast pipeline. Given the known inadequacies of the PAGWIS data, it is reasonable to assume that there may be many hundreds more private water wells in close proximity to wetlands along the PennEast pipeline.

If there are inventory errors regarding the locations of private water supplies, there likely are additional unacknowledged exceptional value wetlands and unacknowledged *impacts* to exceptional value wetlands, which means that the currently-proposed wetland mitigation probably is inadequate. Figure 2 identifies one example of the problem with how wetlands appear to have been misclassified. When a careful inventory of wells in relation to wetlands is conducted, we believe that many additional wetlands will become “exceptional value” because of their association with an existing public or private drinking water supply.

There are at least two common practices currently used by proponents of pipeline projects in Pennsylvania to avoid or minimize impacts to exceptional value wetlands, neither of which appears to have been widely incorporated into the PennEast application. One practice is to avoid surface disturbances to the wetland by use of a trenchless method: either a conventional bore or Horizontal Directional Drilling (HDD).

The use of bores or HDD are pipeline installation practices that can avoid or greatly minimize disturbances to sensitive resources on the ground surface by going beneath them. Trenchless crossings are proposed in only a very few locations along the PennEast pipeline route. Very few HDD and bores are proposed, reportedly because they are difficult operations for a 36-inch diameter pipeline. In the current PennEast pipeline route, only 9 wetland crossings involve trenchless methods (5 HDD crossings and 4 conventional bores), and none of those necessarily is proposed primarily to avoid wetland impacts (see Table 2 below).

Another practice to minimize exceptional value wetland impacts is to simply route the pipeline around them. While avoidance of wetlands is mentioned as a general consideration in the pipeline siting and alternatives analysis, specific areas where identified exceptional value wetlands were avoided is nowhere discussed. Indeed, the opposite seems to be true in some places.

This applicant is unclear and inconsistent when calculating how much permanent conversion of PSS and PFO wetlands is proposed to occur. In the county summaries called “Aquatic Resources Impact Table” for wetlands, a footnote states:

“A 30’ wide ROW will be maintained through PFO and PSS wetlands, resulting in the conversion of PFO and PSS to PEM wetlands.”

That may refer only to crossings to be done by open cut methods, although that is not stated.

In several places in the Project Description (December 2018), the applicant states that a 10-foot wide clearing will be permanently maintained to allow future aerial surveys and maintenance of the pipeline:

“In accordance with FERC guidelines PennEast will maintain a 10-foot-wide corridor centered on the pipeline for operational purposes.” < “Wetland Construction Methods” and

“A permanent 10-foot wide cleared corridor will be maintained through wetland resource areas in accordance with FERC’s *Plan and Procedures*. < “Cleared Areas”

TABLE 2. Applicant-reported wetland crossings by trenchless methods (conventional bore or HDD), PennEast Pipeline, by county, wetland type, wetland classification, length, and reported permanent impact and conversion.

County	Wetland Type (and class)	Milepost	Type	PERMANENT CROSSINGS		
				Length (ft)	Impact area (ac)	Actual 10'-wide Conversion (ac)**
Bucks	PFO (other)	77.5	HDD	65	0.00	0.01
Carbon	PEM (EV)	27R2	HDD	187	0.01	n/a
Carbon	PFO (EV)	27.1R2	HDD	8	0.00	<0.01
Carbon	PFO (EV)	27.1R2	HDD	66	0.00	0.02
Carbon	PSS (EV)	27.1R2	HDD	1431	0.10	0.33
Carbon	PFO (EV)	49.3R3	Bore	153	0.01	0.04 < See Fig 3
Carbon	PSS (EV)	49.3R3	Bore	116	0.01	0.03 < See Fig 3
Northampton	PEM (other)	53.1R3	Bore	7	0.01	n/a
Northampton	PEM (EV)	55.9	Bore	53	0.06	n/a
Luzerne	None					
Monroe	None					

** None of the trenchless crossings of PFO and PSS wetlands is acknowledged by PennEast as having any permanent conversion (to PEM), which cannot be true when a 10-foot wide permanent clearing is proposed to be maintained; so we have calculated here the actual conversion.

The single longest change in the proposed PennEast alignment extends for 4.9 miles, from Milepost 48.7 to MP 53.6. It crosses parts of Carbon, Monroe, and Northampton Counties. This route realignment involves a revised crossing of Special Protection Aquashicola Creek (HQ-CWF) and its associated wetlands, as well as a revised crossing of the Appalachian Trail. One part of the new alignment, from MP 49.2R3 to 49.6R3, is illustrated on Figure 3. Although the proposed alignment here utilizes a bore in crossing under these exceptional value

wetlands, there will be 0.07 acre of permanent longterm conversion. If the wetland delineations are accurate, these impacts could be avoided altogether by moving the alignment either slightly west or east.

Sharp turns in the proposed alignment of this pipeline to avoid surface features are not uncommon. Figure 4 identifies numerous sharp-angle turns in one short section of the pipeline alignment in Bethlehem Township, Northampton County, in order to avoid conflicts with existing buildings. Similar avoidance of wetlands, and particularly of exceptional value wetlands, has not routinely been incorporated into the current alignment. Thus wetland impacts have not been minimized as required by Pa. Code §105.18a(a)(3).

Environmental review of the current pipeline project, which differs from the previous alignment by a total of approximately 16 miles in more than a dozen locations, was made more difficult by the inability of the public to gain access to copies of either GIS shapefiles or KMZ files. No explanation has been provided as to why these digital files were not made available, as they were for earlier versions of this project as well as for other major pipeline projects in Pennsylvania.

Digital KMZ files of the pipeline routes and milepost markers (at 0.1-mile intervals) were available on the PennEast Pipeline company site for the previous versions of the PennEast route (at least for the 2015 and 2016 revisions). Unfortunately, no such KMZ files could be obtained for the current 2018/2019 revision, thereby precluding more significant review and evaluation.

Shapefiles were produced by PennEast in preparing its pipeline project drawings, are easily exportable, are small in size, and are easy to share via email. Indeed, shapefiles were provided to various resource agencies (PA-DCNR, PA Game Commission, PA Fish & Boat Commission, etc.) to aid in their review early in the PennEast application (see Appendix A for selected shapefile references). On another pipeline project (Mariner East 2), the Department saw fit to make numerous shapefiles available to the public on its Pennsylvania Pipeline Portal³. Those shapefiles were most helpful in identifying, across more than 306 miles of ROW, very detailed information regarding the proposed pipeline centerlines, the limits of permanent and temporary disturbance areas, access roads, delineated wetlands, and delineated streams and ponds. The Department has released that type of shapefile information for some pipeline projects, so it should do so for all of them, and in particular, for this PennEast Pipeline project. Otherwise, meaningful public review and comment are greatly hindered.

SUMMARY AND CONCLUSIONS

The latest revisions of the PennEast route in Pennsylvania involve approximately 16 miles in total. Wetlands now are reported to have been field-delineated along 100% of the proposed alignment. We find that the number of wetlands impacted has increased significantly since our last review (of the September 2015 alignment), including exceptional value wetlands. We do

³ <https://www.dep.pa.gov/Business/ProgramIntegration/Pennsylvania-Pipeline-Portal/Pages/Mariner-East-II.aspx>

not believe that all regulated wetlands have yet been identified, and we believe that it is imperative that the wetland boundaries throughout the proposed route be reviewed and confirmed via a Corps of Engineers JD (jurisdictional determination). We believe that the number of exceptional value wetlands has been underreported, particularly those that qualify as such due to their association with public or private water supplies. We believe that wetland impacts have not been avoided or minimized to the greatest practicable extent. We believe that the Department cannot and must not issue Chapter 105 (or 102) permits for the proposed PennEast pipeline until these fundamental issues of resource protection have been addressed and rectified.

AUTHORSHIP

This report was prepared by Stephen P. Kunz with the assistance of James A. Schmid. Both are senior ecologists with Schmid & Company, Inc. Mr. Kunz has worked full-time as a private sector ecological consultant since receiving a degree in human ecology from Rutgers University in 1977. Dr. Schmid is a biogeographer with more than 45 years of experience in ecological consulting. He received his BA from Columbia College and his MA and PhD from the University of Chicago. Both Mr. Kunz and Dr. Schmid are certified as *Senior Ecologists* by the Ecological Society of America and as *Professional Wetland Scientists* by the Society of Wetland Scientists.

Mr. Kunz and Dr. Schmid offer outstanding credentials as experts in ecology, wetlands, environmental regulation, and impact assessment. They have analyzed the environmental impacts of many kinds of proposed development activities in numerous states, including pipeline facilities, coal mining projects, industrial facilities, transportation facilities, commercial developments, and residential developments. They have written Environmental Impact Statements under contract to the US Environmental Protection Agency, Army Corps of Engineers, Interstate Commerce Commission, various agencies of State and local governments, and a diverse array of private sector entities. They also have commented on and prepared analyses of state and federal environmental regulations.

REFERENCES CITED OR CONSULTED

Schmid, James A. 2019. Inaccurate cover classification leads to unnecessary loss of Pennsylvania palustrine wetland forest structure and functions. *Wetland Science & Practice* 36(1):51-60.

Schmid & Company, Inc. 2014. The illusion of environmental protection: permitting longwall coal mines in Pennsylvania. Prepared for Citizens Coal Council, Bridgeville PA. 138 p.

Schmid & Company, Inc. 2016. The effects of the proposed PennEast Pipeline on exceptional value wetlands in Pennsylvania. Prepared for Delaware Riverkeeper Network, Bristol, PA. 52 p.

Schmid & Company, Inc. 2017a. Potential impacts of Mariner East II pipelines on wetlands, streams, and water supplies in Middletown Township and Delaware County, Pennsylvania. Prepared for Middletown Coalition for Community Safety. Media PA. 18 p.

Schmid & Company, Inc. 2017b. A comparison of the water resource impacts associated with alternative alignments of the proposed Atlantic Sunrise pipeline on and near the Nesbitt property, Luzerne and Wyoming counties, Pennsylvania. Prepared for Icarus Ecological Services. January 2017. Media PA. 20 p.

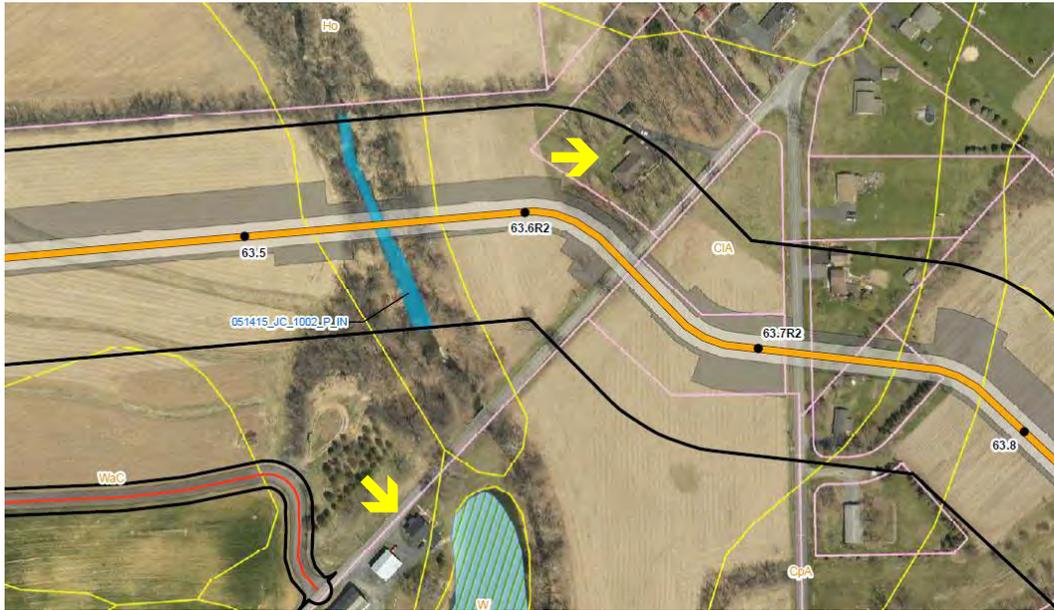


Figure at left is from a section of the applicant's "Figure 3, PennEast Pipeline Project, Wetland Delineation Map – Pennsylvania" (Sheet 162 of 194, dated 12/18/2018) in Upper Nazareth Twp., Northampton County, PA

FIGURES 1a (top left) and 1b (bottom left). Area of likely PFO wetland not mapped at all between Mileposts 63.5 and 63.6R2 in Northampton County. There is a corridor of poorly drained hydric soil ("Ho" in 1a, shaded orange in 1b) here that surrounds a HQ-designated wild trout stream. This would be classified as an "exceptional value" wetland because it is in the floodplain of a wild trout stream.

This wetland also could possibly be exceptional value based on an association with private water supplies. Note the three PAGWIS-mapped wells [blue dots] in 1b, which despite being oddly located with respect to actual properties as shown in 1a, identify only a few of the homes with wells here, including two [yellow arrows] which are even closer to the likely PFO wetland.

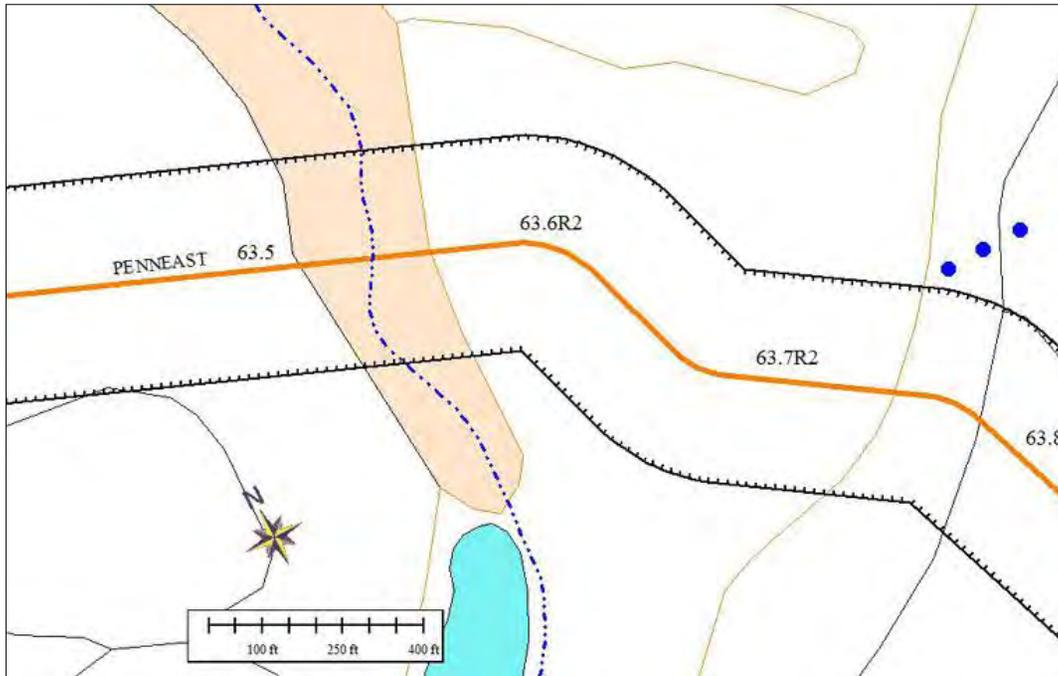


Figure at left is the same section of the PennEast route as above, prepared by Schmid & Company using Global Mapper GIS software, with shapefiles of the route centerline available from PennEast.

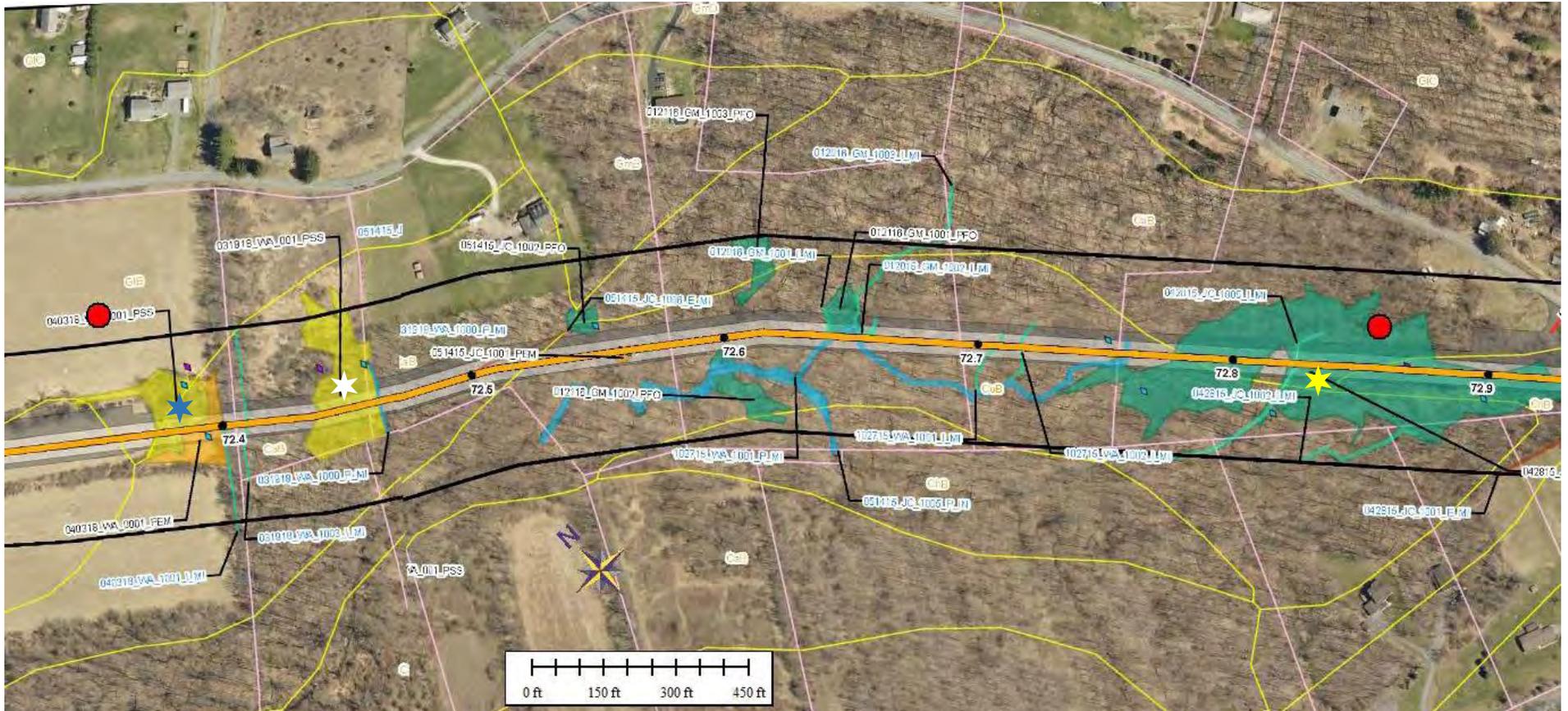


FIGURE 2 Only 2 water wells per the PAGWIS database (red dots) are shown along this short section of the proposed PennEast route in Northampton County between Mileposts 72.3 and 72.9. A PSS wetland mapped within the ROW (yellow shading at **white star**) is listed as being exceptional value in part because of its association with a public or private water supply (PA Code §105.17 criterion “iv”). Although a PSS/PEM wetland just to the west of that one (yellow shading at **blue star**) and a large PFO wetland farther east (green shading at **yellow star**) both are closer to the PAGWIS-mapped wells, neither has been classed as exceptional value under criterion “iv”. Other homes shown nearby in this view, presumably all on private wells because they are outside of any mapped water service areas, may also qualify more of these wetlands as “exceptional value” per this criterion. This inconsistency and apparent lack of attention to §105.17 criterion “iv” was observed for many mapped wetlands throughout the entire PennEast route.

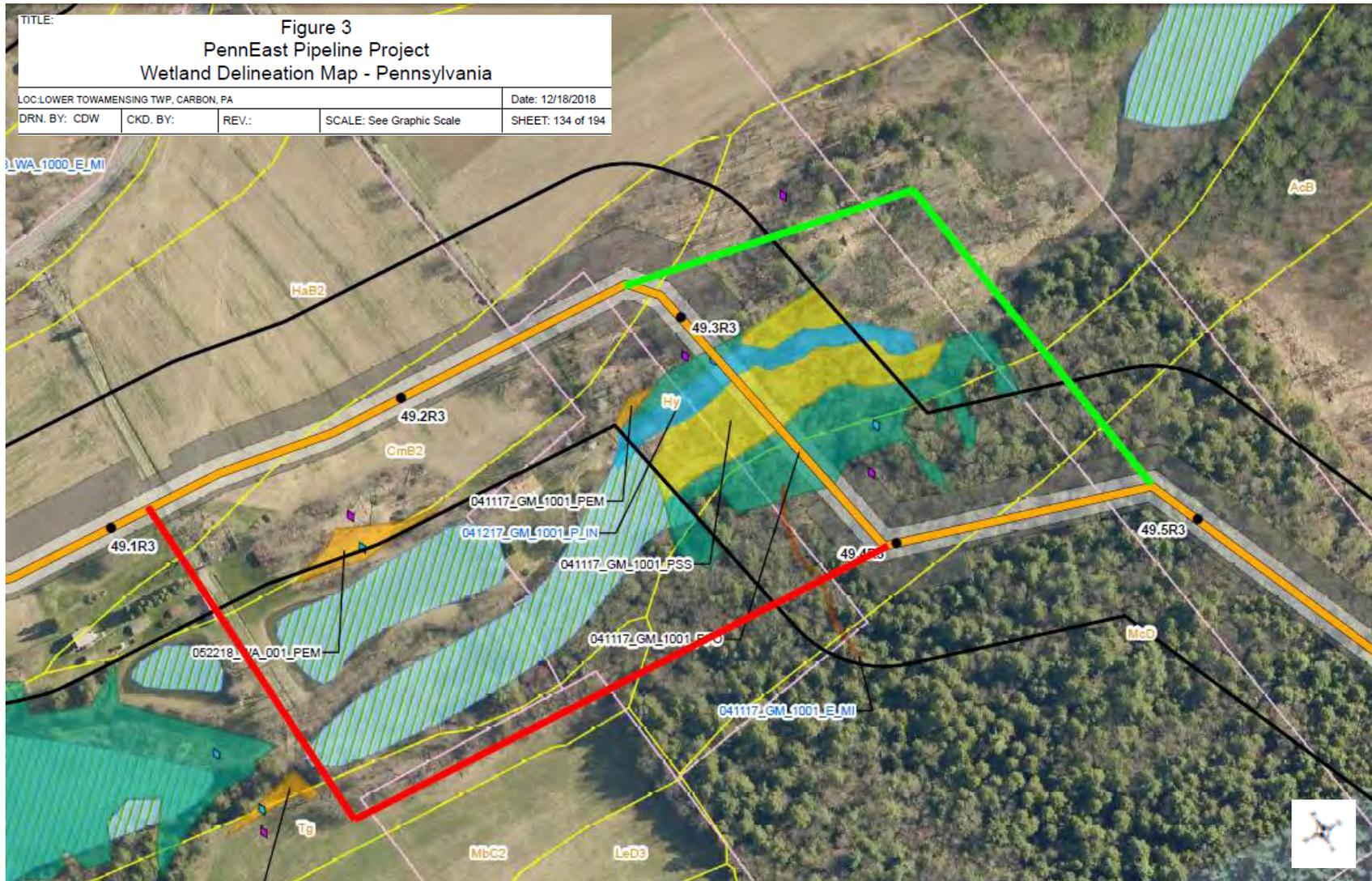


FIGURE 3. Although the proposed new route alignment here in Carbon County (orange lines from 49.3R3 to 49.4R3) involves a bore, it may not be the least damaging to wetlands, especially given the unacknowledged permanent conversion of 0.07 acre of PSS and PFO to PEM above the pipeline here. Relying on the wetland information presented by the applicant [NW1 wetlands in blue cross-hatch, field-delineated wetlands in orange (PEM), yellow (PSS), and green (PFO)], it would be less damaging to **avoid** most if not all wetlands by shifting this crossing slightly to the west (red line “A”) or slightly to the east (green line “B”).

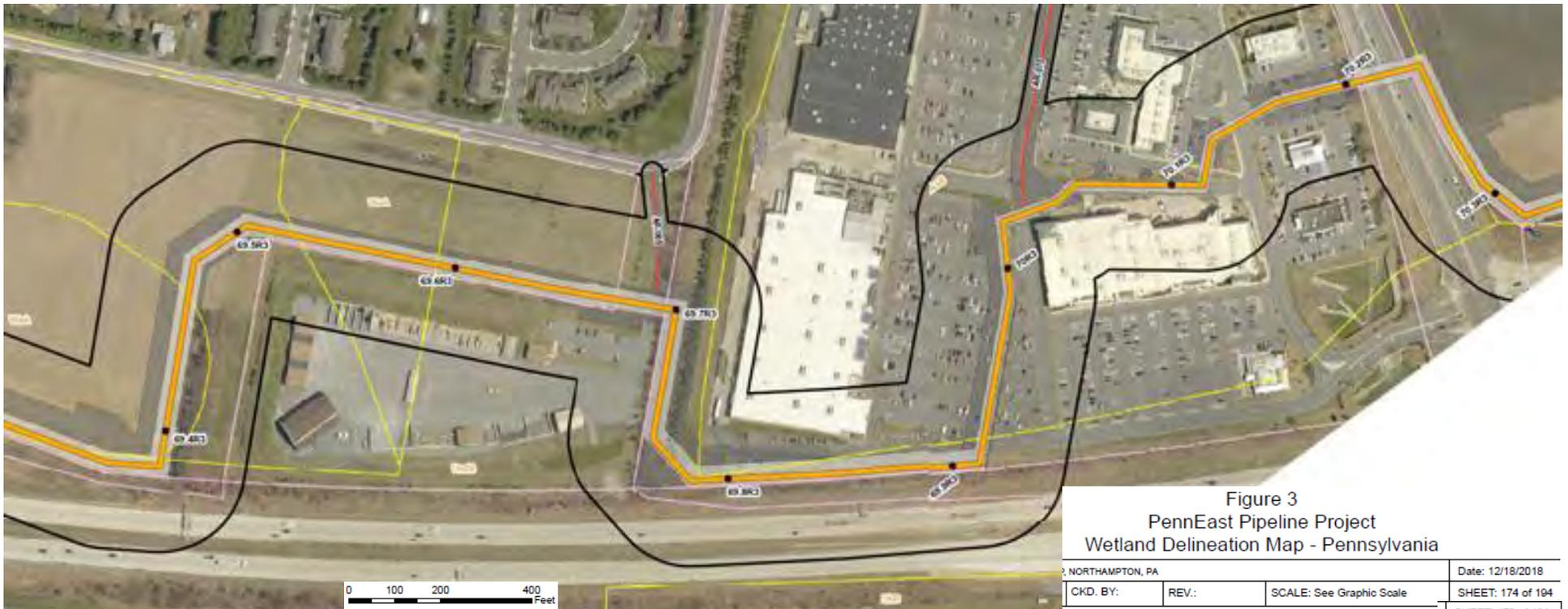


FIGURE 4. Section of the applicant’s “*Figure 3, PennEast Pipeline Project, Wetland Delineation Map – Pennsylvania*” (parts of Sheets 173 and 174 of 194, dated 12/18/2018) in Bethlehem Township, Northampton County, PA. Note the numerous sharp turns that the pipeline alignment (orange lines) makes to avoid surface features such as individual buildings. Similar avoidance of exceptional value wetlands appears not to have been implemented by this applicant.

Appendix A:

**Examples of “shapefiles”
being previously shared by PennEast
and in other pipeline projects**



August 12, 2014

Ms. Rebecca Bowen
Chief, Ecological Services Section

PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105

**Re: Large Project PNDI Review
PennEast Pipeline Company, LLC - PennEast Pipeline Project
Luzerne, Carbon, Northampton, and Bucks Counties, Pennsylvania**

Dear Ms. Bowen:

The PennEast Pipeline Company, LLC (PennEast), is a partnership with UGI Energy Services (UGIES), AGL Resources, NJR Pipeline Company, and South Jersey Industries. The PennEast Pipeline Project (Project) proposes to construct a new 100-mile, 30-inch pipeline to deliver natural gas from northeast Pennsylvania to other markets in Pennsylvania and New Jersey. This new supply of natural gas will bring lower cost supplies to residents and businesses in Pennsylvania and New Jersey, while enhancing pipeline system flexibility and reliability for the local gas utilities.

PennEast intends to file its certificate application for the PennEast Pipeline Project with the Federal Energy Regulatory Commission (FERC) in mid-2015, and anticipates receiving authorization and starting construction in 2017. Permit applications with other federal, state, and local agencies will be submitted within similar timeframes as the certificate application. The permit proceedings conducted by these agencies will provide additional opportunities for public input and involvement. FERC's determination of public convenience and necessity includes a thorough, comprehensive environmental review of proposed projects, working closely with federal, state, and local agencies and in accordance with the National Environmental Policy Act (NEPA).

On behalf of PennEast, URS Corporation (URS) is requesting a Large Project Pennsylvania Natural Diversity Inventory (PNDI) review update for rare, candidate, threatened, and endangered species under the jurisdiction of the Pennsylvania Department of Conservation and Natural Resources for the PennEast Pipeline Project. A critical issues analysis was conducted for multiple routes using readily available secondary source data to select the Least

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Environmentally Damaging Practicable Alternative (LEDPA) route. Mapping depicting the environmental features evaluated for the preferred alternative is enclosed. We are asking for your review prior to the initiation of wetland and watercourse field surveys to be conducted this fall. We hope to concurrently identify any habitat for species under your agencies' jurisdiction at this time. The environmental study area will be a 400-foot corridor centered on the approximately 100-mile alignment. The anticipated permanent right-of-way (ROW) and temporary construction work area will be approximately 100-feet. The study area is wider than the disturbance area to allow for minor alignment shifts to avoid any sensitive resources that may be identified during the environmental field investigations.

The following are enclosed to facilitate your review:

- Large Project PNDI Form;
- PennEast Project Fact Sheet; and
- **CD containing:**
 - **shapefiles of the alignment;**
 - USGS 7.5 minute quadrangle maps with project alignment; and
 - detailed maps depicting the project areas and known secondary source resources

If you have any questions or require additional information regarding this request, please contact me at 610.832.1810 or bernard.holcomb@urs.com.

Sincerely,

Bernard Holcomb
Pipeline Environmental Services Manager
Enclosures (3)

cc: Mr. Anthony Cox (UGI)
Mr. Dante D'Alessandro (UGI)



Pennsylvania Natural Diversity Inventory LARGE PROJECT FORM

This form provides site information necessary to perform an Environmental Review for special concern species and resources listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, the Pennsylvania Fish and Boat Code or the Pennsylvania Game and Wildlife Code.

Applicant Information

Name: Penneast Pipeline Company, LLC
Address: One Meridian Blvd., Suite 2c01 Wyomissing, PA 19610

Phone Number: 844-347-7119 Fax Number:

Contact Person Information - if different from applicant

Name: Bernie Holcomb
Address: 625 W. Ridge Pike, Suite E-100 Conshohocken, Pa 19428
Phone Number: 610-832-1810 Fax Number: 610-832-3501
Email: bernard.holcom

Project Information

Project Name: Penneast Pipeline Project
Project Reference Point (center point of project): Latitude: Longitude: Datum:
Municipality: Multiple County: Luzerne -- Bucks
 Attach a copy of a U.S.G.S. 7 1/2 Minute Quadrangle Map with Project Boundaries clearly marked.
U.S.G.S. Quad Name: Multiple
Provide GIS shapefiles showing the project boundary (strongly recommended)

Project Description

Proposed Project Activity (including ALL earth disturbance areas and current conditions)

The PennEast Pipeline Project (Project) proposes to construct a new 100-mile, 30-inch pipeline to deliver natural gas from northeast Pennsylvania to other markets in Pennsylvania and New Jersey. This new supply of natural gas will bring lower cost supplies to residents and businesses in Pennsylvania and New Jersey, while enhancing pipeline system flexibility and reliability for the local gas utilities.

Total Acres of Property: 5118 Acreage to be Impacted: 1283

- 1. Will the entire project occur in or on an existing building, parking lot, driveway, road, maintained road shoulder, street, runway, paved area, railroad bed, or maintained lawn? Yes No
- 2. Are there any waterways or waterbodies (intermittent or perennial rivers, streams, creeks, tributaries, lakes or ponds) in or near the project area, or on the land parcel? If so, how many feet away is the project? Yes Within Feet No
- 3. Are wetlands located in or within 300 feet of the project area? Yes No If No, is this the result of a wetland delineation? Tbd
- 4. How many acres of tree removal, tree cutting or forest clearing will be necessary to implement all aspects of this project? Tbd

Dept. of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market St., PO Box 8552
Harrisburg, PA 17105
fax: 717-772-0271

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning & Habitat Protection
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

PA Fish and Boat Commission
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823

US Fish and Wildlife Service
Endangered Species Biologist
315 South Allen St., Suite 322
State College, PA 16801
no faxes please



Pennsylvania Natural Diversity Inventory

LARGE PROJECT FORM

How to Use the PNDI Large Project Form

If your Project is a “Large Project”— too large/long to search on the online system

Projects are considered “Large Projects” when the ENTIRE project is:

- Linear/Large Projects that exceed the PNDI online project size limits of 10 miles in length or 5165 acres
- Township-wide, Countywide or Statewide Projects. Examples: Act 537 Sewage Plans, Wind Farms, Roadway Improvements exceeding map limits above.

Due to system limitations and agency requirements, projects should not be submitted piecemeal. The entire project area including roads and infrastructure should be submitted as a single unit.

What to Send to Jurisdictional Agencies

Send the following information to all of the agencies listed on the Large Project Form.

Check-list of Minimum Materials to be submitted:

- ___ Completed Large Project Form
- ___ Supplemental project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
- ___ USGS 7.5-minute Quadrangle with project boundary clearly indicated, and quad name on the map

The inclusion of the following information may expedite the review process.

- ___ GIS shapefiles depicting the project extent
- ___ A basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
- ___ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
- ___ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams

PNDI Large Project Form Definitions

Applicant: Person that owns the property or is proposing the project or activity

Contact Person: Person to receive response if different than applicant (e.g. Consultant)

Project Name: Descriptive title of project (e.g. Twin Pines Subdivision, Miller Bridge Replacement)

Proposed Activity: Include ALL earth disturbance activities for project (e.g. for a timber sale—include stream crossings, cutting areas and new roadway accesses). Also include Current Conditions (e.g. housing, farmland, current land cover), and how Construction/Maintenance Activity is to be accomplished

Total Acres of Property: Entire site acreage (e.g. timber sale property—including road access (200 acres))

Acreage to be Impacted: Disturbance acreage (e.g. timber sale—if the property is 200 acres, but only 100 acres will be disturbed, for example: cutting on 90 acres, a road impacting 10 acres); include all temporary and permanent activities



August 12, 2014

Mr. Daniel Brauning
Chief, Wildlife Diversity Section

PENNSYLVANIA GAME COMMISSION
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

**Re: Large Project PNDI Review
PennEast Pipeline Company, LLC - PennEast Pipeline Project
Luzerne, Carbon, Northampton, and Bucks Counties, Pennsylvania**

Dear Mr. Brauning:

The PennEast Pipeline Company, LLC (PennEast), is a partnership with UGI Energy Services (UGIES), AGL Resources, NJR Pipeline Company, and South Jersey Industries. The PennEast Pipeline Project (Project) proposes to construct a new 100-mile, 30-inch pipeline to deliver natural gas from northeast Pennsylvania to other markets in Pennsylvania and New Jersey. This new supply of natural gas will bring lower cost supplies to residents and businesses in Pennsylvania and New Jersey, while enhancing pipeline system flexibility and reliability for the local gas utilities.

PennEast intends to file its certificate application for the PennEast Pipeline Project with the Federal Energy Regulatory Commission (FERC) in mid-2015, and anticipates receiving authorization and starting construction in 2017. Permit applications with other federal, state, and local agencies will be submitted within similar timeframes as the certificate application. The permit proceedings conducted by these agencies will provide additional opportunities for public input and involvement. FERC's determination of public convenience and necessity includes a thorough, comprehensive environmental review of proposed projects, working closely with federal, state, and local agencies and in accordance with the National Environmental Policy Act (NEPA).

On behalf of PennEast, URS Corporation (URS) is requesting a Large Project Pennsylvania Natural Diversity Inventory (PNDI) review update for rare, candidate, threatened, and endangered species under the jurisdiction of the Pennsylvania Game Commission for the PennEast Pipeline Project. A critical issues analysis was conducted for multiple routes using readily available secondary source data to select the **Least Environmentally Damaging**

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Practicable Alternative (LEDPA) route. Mapping depicting the environmental features evaluated for the preferred alternative is enclosed. We are asking for your review prior to the initiation of wetland and watercourse field surveys to be conducted this fall. We hope to concurrently identify any habitat for species under your agencies' jurisdiction at this time. The environmental study area will be a 400-foot corridor centered on the approximately 100-mile alignment. The anticipated permanent right-of-way (ROW) and temporary construction work area will be approximately 100-feet. The study area is wider than the disturbance area to allow for minor alignment shifts to avoid any sensitive resources that may be identified during the environmental field investigations.

The following are enclosed to facilitate your review:

- Large Project PNDI Form;
- PennEast Project Fact Sheet; and
- CD containing:
 - shapefiles of the alignment;
 - USGS 7.5 minute quadrangle maps with project alignment; and
 - detailed maps depicting the project areas and known secondary source resources

If you have any questions or require additional information regarding this request, please contact me at 610.832.1810 or bernard.holcomb@urs.com.

Sincerely,

Bernard Holcomb
Pipeline Environmental Services Manager
Enclosures (3)

cc: Mr. Anthony Cox (UGI)
Mr. Dante D'Alessandro (UGI)



August 12, 2014

Mr. Chris Urban
Chief, Natural Diversity Section

PENNSYLVANIA FISH AND BOAT COMMISSION
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823

**Re: Large Project PNDI Review
PennEast Pipeline Company, LLC - PennEast Pipeline Project
Luzerne, Carbon, Northampton, and Bucks Counties, Pennsylvania**

Dear Mr. Urban:

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On behalf of PennEast, URS Corporation (URS) is requesting a Large Project Pennsylvania Natural Diversity Inventory (PNDI) review update for rare, candidate, threatened, and endangered species under the jurisdiction of the Pennsylvania Fish and Boat Commission for the PennEast Pipeline Project. A critical issues analysis was conducted for multiple routes using readily available secondary source data to select the **Least Environmentally Damaging**

Page | 1



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 - detailed maps depicting the project areas and known secondary source resources

If you have any questions or require additional information regarding this request, please contact me at 610.832.1810 or bernard.holcomb@urs.com.

Sincerely,

Bernard Holcomb
Pipeline Environmental Services Manager
Enclosures (3)

cc: Mr. Anthony Cox (UGI)
Mr. Dante D'Alessandro (UGI)

spkunz@aol.com

610-356-1416

fax: 610-356-3629

www.schmidco.com

NOTE: the emails on this page refer to shapefiles associated with the Mariner East 2 project, but are applicable to PennEast and other proposed pipelines.

-----Original Message-----

From: Beverly Braverman <mwa@mtwatershed.com>

To: Spkunz <Spkunz@aol.com>

Cc: Melissa Marshall <melissa@mtwatershed.com>

Sent: Thu, Aug 18, 2016 6:56 am

Subject: Fwd: shapefiles

Steve.

Please let me know if these are the ones.

Bev

----- Forwarded message -----

From: **Beverly Braverman** <mwa@mtwatershed.com>

Date: Thu, Aug 18, 2016 at 6:55 AM

Subject: Fwd: shapefiles

To: Melissa Marshall <melissa@mtwatershed.com>

----- Forwarded message -----

From: **Imgrund, Lauren** <limgrund@pa.gov>

Date: Wed, Aug 17, 2016 at 2:51 PM

Subject: shapefiles

To: "mwa@mtwatershed.com" <mwa@mtwatershed.com>

Bev – It is our understanding that the attached shapefiles are public information,

Lauren S. Imgrund | Acting Deputy Secretary

Conservation & Technical Services

PA Department of Conservation & Natural Resources

400 Market St, 7th Floor

Harrisburg, PA 17105

Phone: [717.772.9085](tel:717.772.9085) | E-mail: limgrund@pa.gov

www.dcnr.state.pa.us | www.ExplorePATrails.com



**good for you.
good for all.**
PENNSYLVANIA PARKS & RECREATION