

Appendix D

PNDI REVIEW

**[Note: Detailed reports and agency correspondence available online at:
<http://www.nab.usace.army.mil/Home/Public-Notices/Ops-Public-Notices/>]**

**Appendix D - PNDI Review
USACE Owned/Administered Properties Summary Table**

Appendix	Agency	Date PNDI Review Submitted	Date PNDI Response Rcv'd	Species	USACE Survey Required? (Location)	Survey Results	Avoidance/Minimization Plan	Date Clearance Received
D-1	U.S. Fish & Wildlife Service (USFWS)	11-Dec-13	19-Mar-14	Indiana bat/ Northern long-eared bat (NLEB/IB)	Yes (LL, CRL, RL)	No presence found at LL & CRL. No surveys conducted at RL but previous surveys confirmed presence of NLEB species and IB habitat at RL.	<i>Myotis</i> Conservation Plan	June 24, 2016 (Requires tree clearing between November 15-March 31 for Indiana bat swarming areas i.e. Raystown Lake, and no tree clearing between June 1-July 31 for the Northern long-eared bat.)
				Bald Eagle	No Surveys Required	N/A	-	Not required for USACE properties; No Impact
D-2	PA Game Commission (PGC)	11-Dec-13	14-Mar-14	Indiana bat/ Northern long-eared bat	No Surveys Required (deferred to USFWS)	N/A	-	N/A
				Eastern small-footed bat	No Surveys Required	N/A	-	Not required for USACE properties; No Impact
				Silver-haired bat	Yes (LL, CRL, RL)	No presence found at LL & CRL. No survey conducted at RL.	<i>Myotis</i> Conservation Plan	June 8, 2016 (Requires that trees greater than 5" in diameter at breast height be cut between November 1 st and March 31 st .)
				Allegheny Woodrat	No Surveys Required	N/A	-	Not required for USACE properties; No Impact
D-3	PA Fish & Boat Commission (PAFBC)	11-Dec-13	27-Jan-14; 21-May-14	Timber rattlesnake (TR)	Yes (RL)	One (1) found	Timber Rattlesnake Conservation Plan	September 22, 2015
E-4	PA Dept. of Conservation & Natural Resources (DCNR)	11-Dec-13	30-Jan-14	RTE Plants -shale-barren evening primrose -Kate's mountain clover)	Yes (RL)	No presence found	-	January 15, 2016

Notes: LL = Loyalhanna Lake; CRL = Conemaugh River Lake; RL = Raystown Lake

Appendix D-1

USFWS Correspondence

**(Note: Detailed reports and agency correspondence available online at:
<http://www.nab.usace.army.mil/Home/Public-Notices/Ops-Public-Notices/>)**



PITT-04-16-036
April 26, 2016
Project Number 112IC05958

Pamela Shellenberger
U.S. Fish and Wildlife Service
110 Radnor Rd; Suite 101
State College, PA 16801

**Subject: Revised *Myotis* Conservation Plan and Additional Bulrush Requests
Sunoco Pipeline, L.P. - Pennsylvania Pipeline Project Multiple Counties
USFWS Project #2014-0200**

Dear Ms. Shellenberger:

Tetra Tech, Inc. (Tetra Tech) has been retained by Sunoco Pipeline, L.P. (SPLP) to conduct environmental field surveys and permitting services for the proposed Pennsylvania Pipeline Project (PPP or Project). On behalf of SPLP, Tetra Tech is providing a revised *Myotis* Conservation Plan and additional supporting information for the northeastern bulrush to the U.S. Fish and Wildlife Service (USFWS or Service)-Pennsylvania Field Office in response to comments received from the Service during a January 26, 2016 meeting.

Through discussions with the Service, SPLP will avoid take of Indiana and northern long-eared bats through the use of the attached, revised *Myotis* Conservation Plan, which also outlines how SPLP will offset habitat impacts for the Indiana bat. A summary of the results of the mist-net surveys and mine portal surveys are also provided within the Plan. To summarize, as a standard practice for avoiding impacts to these bat species, SPLP will conduct tree clearing between November 15 and March 31 within the two known Indiana bat swarming habitat protection radii and between June 1 and July 31 within the 150 foot protection radius of a single northern long-eared bat roost tree location.

Through several design iterations SPLP has minimized tree clearing as much as operationally possible, however some areas will need to be cleared to allow safe installation and operation. Within the 0.25-mile buffer of the Project's limit of disturbance (LOD) and within the Hartman Mine swarming habitat, there are approximately 8,600 acres of forested area. Within the LOD and within the known Hartman Mine swarming habitat radius there are approximately 258 acres of the 8,600 forested area that will need to be cleared. As a habitat impact off-set measure, a payment to the Indiana Bat Conservation Fund (IBCF) will be remitted for the tree acreage that needs to be cleared within the Hartman Mine swarming habitat radius in Cambria, Blair, and Huntingdon counties. In summary, the approximate tree clearing area within the swarming area radius in Cambria, Blair, and Huntingdon counties are 42, 125, and 91 acres, respectively. SPLP has deposited an initial amount of \$702,187 and will be making a second deposit of \$300,632 to the IBCF. The total deposit amount will be \$1,002,819. The attached *Myotis* Conservation Plan includes the Calculation Sheet for Indiana Bat Habitat Compensation that outlines these amounts. The second check payable to the Indiana Bat Conservation Fund (Acct #710621004) will be submitted upon the Service's approval of the attached *Myotis* Conservation Plan to the First Commonwealth Bank – Trust Division. Proof of the deposit will then be sent to the USFWS and PADEP.

SPLP has also committed to performing emergence surveys at 66 potential roost trees on USACE lands (i.e., Raystown Lake Recreation Area) where trees could not be cleared between November 15 and March 31 due to the land acquisition process. The data for these trees was previously submitted to the Service in a December 2015 Report from Apogee Environmental and Archaeology titled, "*A Myotis Bat Summer and Winter Habitat Assessment for the Pennsylvania Pipeline Project in Huntingdon, Indiana, and Westmoreland Counties, Pennsylvania*". This report was updated in April 2016 to include the applicability of completing emergence surveys for bats at the potential roost trees identified in the report and the updated report is provided as Appendix C of the attached *Myotis* Conservation Plan. These emergence surveys will be completed prior to tree clearing to prevent the incidental take of Indiana within these areas.

Tetra Tech

661 Andersen Drive, Pittsburgh, PA 15220-2700
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The Service identified the Northeastern bulrush as potentially occurring within the Project area in Cambria, Blair, Huntington, Juniata, and Perry Counties. Consultation with USFWS determined that field surveys should focus on wetlands, waterbodies, and vernal pools within the Project area at 1,300 feet elevation or higher as suitable habitat. Northeastern bulrush surveys by Service approved biologists began in August 2014 and were completed in August 2015. The surveys were completed by Tetra Tech, PA Soil & Rock, and Skelly and Loy. Survey Reports for these activities have been previously provided to the Service.

Field surveys identified 231 total potential northeastern bulrush habitat areas (e.g. vernal pools, wetlands, floodplain depressions) within 46 Study Areas. Field surveys of these potential bulrush habitat areas identified two confirmed northeastern bulrush populations, one in Cambria County and one in Blair County. The Cambria Co. population is located within the proposed LOD, approximately 75-ft from an existing access road. The Blair Co. population is located approximately 340-ft from the edge of the proposed LOD.

As outlined in the previously submitted September 2015 Northeastern Bulrush Conservation Plan for the PPP, SPLP has taken measures to ensure no direct impacts occur to these identified populations. SPLP anticipates that a Project re-route shifting the proposed LOD from 125 feet within the population to 340 feet away will avoid potential impacts to the Blair Co. population. Impacts to the Cambria Co. population will be avoided with the use of the Horizontal Directional Drill installation method, along with exclusion fencing, signage, compliance inspection, and implementation of an inadvertent return contingency plan. In response to a comment from the Service, SPLP has updated the Inadvertent Return Contingency Plan (Attachment 2) to list the USFWS as a contact should an inadvertent return occur during the HDD in Cambria County. In response to an additional comment from the Service, a memo prepared by Skelly and Loy, Inc. indicating that the wetland supporting the population of northeastern bulrush in Blair County has no direct connectivity to Wetland L70 that will be open cut is included as Attachment 3.

Based on the information provide herein, the attached survey reports and conservation plans, and what is known about the presence and/or potential presence of these ESA listed species in the vicinity of the project areas, it is Tetra Tech's conclusion that the PPP is not likely to adversely affect the Indiana bat, northern long-eared bat, or northeastern bulrush. We request, on behalf of SPLP, the Service's concurrence with this determination to satisfy Federal and State permit requirements.

Thank you for your assistance in this matter and we look forward to your review and concurrence. If you have any questions regarding this request, please feel free to contact me at 412.921.8167 or preston.smith@tetratech.com.

Sincerely,



Preston R. Smith
Manager, Wetlands and Ecological Services

Attachments:

- Myotis* Conservation Plan
- Revised Inadvertent Return Contingency Plan
- Memo: Connectivity of Wetland L70 to Blair County Northeastern Bulrush Population

- CC: Brian Scofield, USFWS (cover letter only)
Chris Embry, Sunoco Logistics
Monica Styles, Sunoco Logistics
Matt Gordon, Sunoco Logistics
Brad Schaeffer, Tetra Tech
Sandy Lare, Tetra Tech
Gary Mowad, GMEC (cover letter only)
File 112IC05957



September 30, 2015

Pamela Shellenberger
U.S. Fish and Wildlife Service
110 Radnor Rd; Suite 101
State College, PA 16801

**Subject: Request for Effects Determination Concurrence
Sunoco Pipeline, L.P. - Ohio Pipeline Project Washington County, PA
(Formerly part of the Mariner East 2 Pipeline Project - Project #2014-
0200)**

Dear Ms. Shellenberger:

Tetra Tech, Inc. (Tetra Tech) has been retained by Sunoco Pipeline, L.P. (SPLP) to conduct environmental field surveys and permitting services for the proposed Pennsylvania Pipeline Project (PPP) formerly part of the Mariner East 2 Pipeline Project (ME2). On behalf of SPLP, Tetra Tech is requesting effects determination concurrence from the U.S. Fish and Wildlife Service (Service)-Pennsylvania Field Office for the PPP.

On December 12, 2013 a Large Project Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Request including a large project form, project description, and preliminary project USGS topographic mapping was provided to the USFWS under the preliminary project name "Mariner East 2 Pipeline - Trans-Pennsylvania". The Mariner East 2 Project was described as traversing the state of Pennsylvania. However, after field activities began, the project was split into two separate and independent projects; the PPP and the Ohio Pipeline Project (OPP) (Attachment 1). The PPP involves the phased installation of approximately 561 miles of two parallel pipelines within a 306-mile, 50-foot-wide right-of-way (ROW) from Houston, Washington County, Pennsylvania to SPLP's Marcus Hook facility in Delaware County, Pennsylvania with the purpose of interconnecting with existing SPLP Mariner East pipelines. Initially, a 20-inch diameter pipeline would be installed within the ROW from Houston to Marcus Hook (306 miles) and a second, up to 20-inch diameter pipeline, would be installed in the same ROW. The second line is proposed to be installed from SPLP's Delmont Station, Westmoreland County, Pennsylvania to the Marcus Hook facility, paralleling the initial line for approximately 255 miles.

We received a response to our December 12, 2013 request for information dated March 19, 2014 from the Service and it is included as Attachment 2. The Service response identified the Indiana bat, northern long-eared bat, and bog turtle ESA species of concern and a number of follow-up conversations were held by phone for further clarification. One of those follow-up conversations on April 1, 2015, indicated that the northeastern bulrush was an additional species of concern. In response to USFWS survey requirements, qualified Biologists surveyed for Indiana and northern long-eared bats, bog turtle, and northeastern bulrush in appropriate locations along PPP. Bog turtles will be addressed in a separate submittal package.

As a result of these correspondences with the Service, mist-net surveys were implemented by Apogee Environmental and Archeological, Inc. (Apogee) in accordance with *Range-Wide*

Indiana Bat Summer Survey Guidelines and survey conditions listed under the Pennsylvania Game Commission (PGC) Special Use Permit. Surveys were conducted within 294, 1-km blocks along most of the PPP alignment in Pennsylvania and began in May 2014 and continued during the netting season through August 2015. Results of the 2014 surveys have been provided to USFWS, but are included in Attachment 3. This attachment also includes mapping of survey areas as a supplement. Additional surveys were completed during the 2015 netting season and survey results and locations are also provided in Attachment 3.

Per the Service, 100 of these survey blocks are within two known Indiana bat swarming habitat protection radii (Layton Fire Clay Mine swarming habitat radius in Allegheny and Westmoreland counties and Hart Mine swarming habitat radius in Cambria, Blair, and Huntingdon counties). Therefore mist-netting surveys were not completed in these areas due to the known habitat status. An additional 12 square km blocks were not surveyed due to a lack of tree cover within the entire block. Similarly, an additional 65 blocks occurring within a recently constructed SPLP project called Mariner East 1 were not surveyed due construction being restricted primarily to the same limits of disturbance (LOD) requiring minimal additional tree clearing and previous correspondence from the USFWS that directed concerns primarily to the swarming areas. No Indiana bats were captured during the mist net surveys, however, thirty-two (32) northern-long eared bats were captured. In addition, mine portal searches and netting of appropriate features were conducted. Mine portal and cave field location surveys began in August 2014 and were completed in September 2014 with netting surveys of appropriate features being completed in October 2014. No bats were captured during the mine portal survey efforts.

Through discussions with the Service, SPLP has decided to avoid take of Indiana and northern long-eared bats through the use of a *Myotis* Conservation Plan (Attachment 4), which also outlines how SPLP will offset habitat impacts for the Indiana bat. A summary of the results of the mist-net survey and mine portal surveys are also provided in this Plan. To summarize, as a standard practice for avoiding impacts to these bat species, SPLP will conduct tree clearing between November 15 and March 31 within the two known Indiana bat swarming habitat protection radii and between October 1 and March 31 within the protection radius of northern long-eared bat capture locations (1.5 miles centered on a roost tree for a tracked capture tracked or 3 miles centered on the capture location for non-tracked captures). This commitment is outlined within the attached *Myotis* Conservation Plan (Attachment 4). In addition, SPLP through the design of the project has minimized tree clearing as much as operationally possible. Within the project LOD and within the known Hartman Mine swarming habitat radius there are approximately 243 acres of forested area. Within the 0.25-mile buffer of the LOD and within the Hartman Mine swarming habitat, there are approximately 5,000 acres of forested area.

As a habitat impact off-set measure, a payment to the Indiana Bat Conservation Fund (IBCF) will be remitted for the tree acreage located within the Hartman Mine swarming habitat radius in Cambria, Blair, and Huntingdon counties that would need to be cleared as a result of the Project. The *Myotis* Conservation Plan (Attachment 4) includes the Calculation Sheet for Indiana Bat Habitat Compensation. In summary, the approximate tree clearing area within the swarming area radius in Cambria, Blair, and Huntingdon counties are 18, 128, and 97 acres, respectively. The multiplier for a P2 swarming area is 1.5. However, due to the co-location of the majority of the project and a larger portion of the impacted acreage occurring within temporary workspaces that will be allowed to re-vegetate and will not be included in any maintenance or operation plans, a multiplier of 1.0 was used. The total deposit amount will be \$667,187. A check payable to the Indiana Bat Conservation Fund (Acct #710621004) will be sent at a later date to First Commonwealth Bank – Trust Division. Proof of the deposit will then be sent to the USFWS and PADEP.

The Service identified the Northeastern bulrush as potentially occurring within the Project area in Cambria, Blair, Huntingdon, Juniata, and Perry Counties. Consultation with USFWS

determined that field surveys should focus on wetlands, waterbodies, and vernal pools within the Project area at 1,300 feet elevation or higher as suitable habitat. Northeastern bulrush surveys by Service approved biologists began in August 2014 and were completed in August 2015. The surveys were completed by Tetra Tech, PA Soil & Rock, and Skelly and Loy. Survey Reports for these activities are provided in Attachment 5.

Field surveys identified 231 total potential northeastern bulrush habitat areas (e.g. vernal pools, wetlands, floodplain depressions) within 46 Study Areas. Field surveys of these potential bulrush habitat areas identified two confirmed Northeastern bulrush populations, one in Cambria County and one in Blair County. The Cambria Co. population is located within the proposed LOD, approximately 75-ft from an existing access road. The Blair Co. population is located outside of the proposed LOD, approximately 340-ft from the edge of the proposed LOD. As outlined in the Northeastern Bulrush Conservation Plan (Attachment 6), SPLP has taken measures to ensure no direct impacts occur to these identified populations. SPLP anticipates that a Project re-route shifting the proposed LOD from 125 feet within the population to 340 feet away will avoid potential impacts to the Blair Co. population. SPLP anticipates that impacts to the Cambria Co. population will be avoided with the use of an HDD, along with exclusion fencing, signage, compliance inspection, and implementation of an inadvertent return contingency plan.

Based on the information provide herein, the attached survey reports and conservation plans, and what is known about the presence and/or potential presence of ESA listed species in the vicinity of the project areas, it is Tetra Tech's conclusion that the PPP is not likely to adversely affect the Indiana bat, northern long-eared bat, or northeastern bulrush. We request, on behalf of SPLP, the Service's concurrence with this determination to satisfy Federal and State permit requirements.

Thank you for your assistance in this matter and we look forward to your review and concurrence. If you have any questions regarding this request, please feel free to contact me at 412.921.8167 or preston.smith@tetrattech.com.

Sincerely,

Preston R. Smith
Manager, Wetlands and Ecological Services

Attachments:

- PPP Project Overview Map (Attachment 1)
- USFWS Pennsylvania Field Office Response Letter (Attachment 2)
- Bat Survey Reports (Attachment 3)
- Myotis* Conservation Plan (Attachment 4)
- Northeastern Bulrush Survey Reports (Attachment 5)
- Northeastern Bulrush Conservation Plan (Attachment 6)

CC: Chris Embry, Sunoco Logistics;
Matt Gordon, Sunoco Logistics;
Brad Schaeffer, Tetra Tech;
Sandy Lare, Tetra Tech;
File 112IC05958



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, Pennsylvania 16801-4850

June 24, 2016

Preston Smith
Tetra Tech
661 Andersen Drive
Foster Plaza
Pittsburgh, PA 15220-2700

RE: USFWS Project #2014-0200

Dear Mr. Smith:

Thank you for your letters of April 22 and 26, 2016, as well as your email of May 12, 2016, which provided the Fish and Wildlife Service (Service) with additional information regarding Sunoco Pipeline, L.P., proposed Pennsylvania Pipeline (formerly part of the Sunoco Mariner East 2 Pipeline) project located in Washington, Allegheny, Westmoreland, Indiana, Cambria, Blair, Huntington, Juniata, Perry, Cumberland, York, Dauphin, Lebanon, Lancaster, Berks, Chester, and Delaware counties, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species and the Migratory Bird Treaty Act (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended) to ensure the protection of migratory bird species.

The project involves the phased installation of approximately 561 miles of two parallel pipelines within a 306-mile, 50-foot wide right-of-way (ROW) from Houston, Washington County, Pennsylvania to Sunoco Pipeline, L.P.'s (SPLP), Twin Oaks facility in Delaware County, Pennsylvania with the purpose of interconnecting with existing SPLP Mariner East pipelines. As initially described, a 20-inch diameter pipeline would be installed within the ROW from Houston, PA to the Twin Oaks facility (306 miles) and a second, up to 20-inch diameter pipeline, is proposed to be installed in the same ROW. The second line is proposed to be installed from SPLP's Delmont Station, Westmoreland County, Pennsylvania to the Twin Oaks facility, paralleling the initial line for approximately 255 miles.

Federally listed species

Bog Turtle

The project area is within the range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. The species inhabits shallow, spring-fed fens, sphagnum bogs,

swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. To determine the potential effects of the proposed project on bog turtles and their habitat, Stan Boder, James Drasher, Kevin Keat, Jason Tesauro, Ben Berra, Andy Brookens, and Logan Zugay conducted Phase I bog turtle habitat assessments on all wetlands within 300 feet of the project's proposed limit of disturbance (LOD). According to their reports, 430 wetlands extend to within 300 feet of the proposed LOD within the range of the bog turtle. Following the methods described under "Bog Turtle Habitat Survey" (Phase I survey) of the Guidelines for Bog Turtle Surveys (revised April 2006), the surveyors determined that 334 of the subject wetlands do not have the combination of soils, vegetation, and hydrology typical of habitat occupied by bog turtles. We agree with their habitat determination for those wetlands.

Species presence surveys (Phase II surveys) were initiated at 99 wetlands determined by the surveyors to have the combination of habitat characteristics typical of areas occupied by bog turtles. Based on survey results and known bog turtle occurrences, Tetra Tech reported that there are four wetlands within the LOD and four wetlands within 300 feet of the LOD that are occupied by bog turtles (Table 1.).

Table 1. Occupied wetlands the will be directly or indirectly affected by the action.

Wetlands	BT Occupancy	Location
A54	Occupied	Within LOD
A55	Occupied	Within LOD
AM2	Occupied	Within LOD
AM3	Occupied	Within 300 feet
C6	Occupied	Within LOD
C7	Occupied	Within 300 feet
C8	Occupied	Within 300 feet
C44	Occupied	Within 300 feet

To avoid adverse effects to the known bog turtle populations in wetlands A54 and A55 the applicant has proposed the following measures:

1. Drill under Wetlands A54 and A55 using horizontal directional drilling (HDD) during the bog turtle active season (April 1 and October 31);
 - a. Prior to performing any construction work in wetlands, streams, or uplands within 300 feet of the potential bog turtle habitat, all areas of expected disturbance must be surveyed by a qualified surveyor for the presence of bog turtles immediately prior to construction commencement.
 - b. Prior to the survey, herbaceous vegetation should be cut to a height of 4 to 6 inches using a hand-held trimmer/weed-cutter, and then carefully raked away from the area to be searched. A qualified bog turtle surveyor should be present when this vegetation clearing occurs.
 - c. Immediately following the survey, silt-fencing should be placed between the wetland and the proposed construction zone while the bog turtle surveyor is present to ensure that the fencing is properly installed in the correct location. The silt-fencing should be removed immediately following construction.

2. Ensure the HDD will be in bedrock prior to drilling beneath the wetlands by utilizing the information provide in geotechnical reports;
3. Implement Service-approved Inadvertent Return Contingency Plan;
4. Install a series of piezometers to monitor groundwater conditions before, during, and after the HDD following a Service-approved monitoring plan.
5. Post-construction routine pipeline operation and maintenance protective measures:
 - a. "No Mowing" signs will be placed along the boundary of Wetlands A54 and A55 to prevent disturbance during post-construction right-of-way (ROW) maintenance activities;
 - b. Additional signs will be placed at the edge of Zone 2 (300 feet from the wetland edge) to demarcate the limit of herbicide application within the ROW;
 - c. Only hand clearing will occur in Zone 2 and will be conducted between October 1 and March 31.

During an April 6, 2016, field view, Service-biologist Brian Scofield, acknowledged the marginal, but suitable, habitat conditions of Wetland AM2 and recommended a time-of-year restriction or pre-construction survey. The same recommendation was given for Wetlands AM3, C7, C8, and C44 because of their proximity to known bog turtle populations. Therefore, the applicant has proposed that either construction will take place between November 1 and March 31, when bog turtles are hibernating, or a pre-construction survey will be performed if construction occurs between April 1 and October 31, during which time bog turtles are active. If construction takes place during the active season the following measures will be followed.

1. Prior to performing any construction work in wetlands, streams, or uplands within 300 feet of the potential bog turtle habitat, all areas of expected disturbance must be surveyed by a qualified surveyor for the presence of bog turtles immediately prior to construction commencement.
2. Prior to the survey, herbaceous vegetation should be cut to a height of 4 to 6 inches using a hand-held trimmer/weed-cutter, and then carefully raked away from the area to be searched. A qualified bog turtle surveyor should be present when this vegetation clearing occurs.
3. Immediately following the survey, silt-fencing should be placed between the wetland and the proposed construction zone while the bog turtle surveyor is present to ensure that the fencing is properly installed in the correct location. The silt-fencing should be removed immediately following construction.
4. If any bog turtles are located during these searches, the Service and Pennsylvania Fish and Boat Commission (PFBC) should be contacted immediately, and construction should not proceed until further consultation occurs. Survey results should be submitted to the Service and PFBC.

To avoid the risk of take to the known bog turtle population in Wetland C6 the applicant has proposed the use of a dry-bore to go under the wetland and avoid surface impacts. Because dry-bore technology does not utilize pressurized fluid to bore, there is no risk of an inadvertent return; therefore, the applicant has proposed the same minimization measures as Wetlands AM2, AM3, C7, C8, and C44.

With the implementation of the avoidance and conservation measures listed above and in the

applicant's April 2016 Bog Turtle Conservation Plan, this project is not likely to adversely affect the bog turtle. If you are unable to implement all proposed avoidance measures or project plans change, further consultation with the Service will be required, pursuant to the Endangered Species Act.

Indiana bat

The proposed project is located within the range of the Indiana bat (*Myotis sodalis*), a species that is federally listed as endangered. Mist-net surveys were conducted within the appropriate survey windows between May 15, 2014, and August 4, 2015, for Indiana bats. Surveys were carried out only where suitable habitat existed and where those areas occurred outside of already assumed occupied habitats (swarming areas).

According to the April 2016 survey report, surveys were conducted at 294 survey blocks within the project area, in accordance with the Fish and Wildlife Service's 2014 and 2015 Indiana bat summer survey guidelines, which are designed to detect the presence of Indiana bat maternity colonies. During these surveys, no Indiana bats were captured. Additionally, 12 portals were analyzed as potential hibernacula. Harp traps and acoustic surveys were performed, but did not yield any Indiana bat captures or calls. Therefore, based on these survey results, we conclude (1) there is no higher population density of Indiana bat activity that would be typical of a maternity colony, and (2) it is unlikely that the studied mine portals support Indiana bats.

Portions of the project area are within two known Indiana bat hibernacula swarming areas. Swarming areas are habitat surrounding known hibernation sites that the bats depend on for spring staging and fall swarming (the periods following emergence from hibernation and prior to reentering hibernation, respectively). These swarming areas are also used by some male bats, but are not used by reproductive females through the warmer seasons. As such, Sunoco Pipeline, L.P., has submitted an Indiana Bat Conservation Plan. The proposed project will affect approximately 258 acres of forest habitat in the vicinity of the Hartman Mine Indiana bat swarming area. To avoid adverse effects on Indiana bats, Sunoco Pipeline, L.P. has agreed to implement the measures outlined in their April 2016 Indiana Bat Conservation Plan for the subject pipeline project. This includes a commitment to cut trees between November 15 and March 31 in the Indiana bat swarming area. The Conservation Plan also details specific measures that will be implemented to avoid indirect effects of the cumulative forested habitat loss on Indiana bats, including the contribution of \$1,002,819 into the Indiana Bat Conservation Fund that will be used for permanent conservation of Indiana bat habitat.

The project information and our analysis includes a portion of the pipeline project that traverses through Raystown Lake Recreation Area, which is located in Hartman Mine Indiana Bat Swarming Area. Sunoco Pipeline, L.P. has committed to removing these trees between November 15 and March 31 during a time when bats are assumed to be hibernating to avoid the risk of directly killing roosting bats.

Additionally, a small segment of the pipeline will traverse a portion of the Layton Fire Clay Mine Indiana bat swarming area. There is limited tree clearing proposed here (approximately 0.62 acres), due to this portion of the line being collocated with an existing right-of-way. To

avoid the risk of directly killing or injuring Indiana bats, Sunoco Pipeline L.P., has agreed to implement tree clearing in this swarming area between November 15 and March 31.

The Service has reviewed the Conservation Plan and found it to address the recommended avoidance and conservation measures outlined in our guidance. Therefore, with the implementation of these measures: (1) time of year restrictions on tree clearing to avoid the risk of direct take of Indiana bats, (2) the results of the mist-net and hibernacula surveys that failed to locate maternity colonies or new hibernation sites, and (3) use of the Indiana Bat Conservation Fund to offset indirect effects to bats that may result from aggregate forest habitat loss of swarming habitat, we conclude that effects of the project on the Indiana bat are insignificant or discountable.

Northern long-eared bat

The proposed project is located within the range of the federally threatened northern long-eared bat (*Myotis septentrionalis*). On February 16, 2016, the final rule that tailors protections for the northern long-eared bat under the Endangered Species Act became effective (81 FR 1900; see: <http://www.fws.gov/midwest/endangered/mammals/nlecb/pdf/FRnlecbFinal4dRule14Jan2016.pdf>).

Mist-net surveys were conducted within the appropriate survey windows between May 15, 2014 and August 4, 2015, for northern long-eared bats.

According to the April 2016 survey report, surveys were conducted at 294 survey blocks within the project area, in accordance with the Fish and Wildlife Service's 2014 and 2015 Indiana bat summer survey guidelines. During the 2014 surveys, 30 northern long-eared bats were captured and 13 were radio-tracked. Two more northern long-eared bats were captured and radio-tracked in 2015 surveys. Additionally, 12 portals were analyzed as potential hibernacula. Harp trapping and acoustic surveys were performed at the portals, but did not yield any northern long-eared bat captures or calls.

Although several northern long-eared bat roost trees were documented close to the LOD, only one roost tree was identified within 150 feet of project disturbance. In accordance with the final 4(d) rule, removal of this roost tree will not occur between June 1 and July 31. Additionally, your project is not located within 0.25 mile of a known northern long-eared bat hibernaculum. Therefore, following the June 1 --July 31 time of year restriction on roost tree clearing, any incidental take that might result from tree removal is not prohibited, and no further consultation regarding this species is necessary. More information on the northern long-eared bat and the 4(d) rule can be found here: <http://www.fws.gov/midwest/endangered/mammals/nlecb/>

Northeastern bulrush

The project is within the known range of the northeastern bulrush (*Scirpus ancistrochaetus*), a federally listed, endangered plant. Surveys were conducted for this species in 2014 and 2015. 231 potential northeastern bulrush habitat areas were identified. These 231 habitat areas revealed two previously undocumented northeastern bulrush populations. The Blair County population is located approximately 340 feet from the edge of the proposed LOD and is not hydrologically connected to Wetland L70, which is located in the ROW.

The Cambria County population is located within the LOD, approximately 75 feet from a proposed access road. To minimize and avoid impacts to this population, Sunoco Pipeline, L.P., proposes to install the pipeline under this wetland system via HDD. While we support this method of crossing to reduce vernal pool and wetland impacts, best management practices need to be employed to minimize potential harm to listed species. The pipeline will be approximately 50 feet below the surface. The entry point will be about 150 feet from the population and the exit point will be about 1,534 feet southeast of the population. The HDD length will be approximately 1,684 feet.

Despite best intentions, drilling fluids can still be released to the surface. Damage to the wetlands, its hydrology, flora or fauna can occur from equipment used to clean up the drilling fluid material. Therefore, all precautions to prevent an inadvertent release (IR) should be implemented, including examining the subsurface soil and bedrock material to determine geotechnical limitations or IR probability, and designing a drill path to minimize drill pressure and entry angles. As a means to minimize impacts should an IR occur, you provided an HDD Inadvertent Release Contingency Plan. In addition to the instructions in this Plan, please add the USFWS phone number (provided below) as an agency to be contacted should an IR occur, and inform the HDD contractor about the sensitive nature of the drill at this location.

With the aforementioned buffers in place and a successful HDD, this project is not likely to adversely affect these northeastern bulrush populations.

Assessment of Risks to Migratory Birds

As mentioned in our letter of March 19, 2014, and discussed during our meeting of September 9, 2015, the Service is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species; however, at this point, you have not provided us with a migratory bird conservation plan or any other information about how, or if, SPLP will minimize impacts to migratory bird species. The Migratory Bird Treaty Act prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for allowing unauthorized take, the FWS recognizes that some birds may be taken during activities such as pipeline construction even if all reasonable measures to avoid take are implemented. The FWS's Office of Law Enforcement carries out its mission to protect migratory birds not only through investigation and enforcement, but also through fostering relationships with individuals and industries that proactively seek to eliminate their impacts on migratory birds. Although it is not possible under the MBTA to absolve individuals, companies, or agencies from liability (even if they implement avian mortality avoidance or similar conservation measures), the Office of Law Enforcement focuses on those individuals, companies, or agencies that take migratory birds with disregard for their actions and the law, especially when conservation measures have been developed but are not properly implemented.

The potential exists for avian mortality from habitat destruction and alteration within the project boundaries. Site-specific factors that should be considered in project siting to avoid and minimize the risk to birds include avian abundance; the quality, quantity and type of habitat; geographic location; type and extent of bird use (e.g. breeding, foraging, migrating, etc.); and

landscape features. Please review the enclosed information for general recommendations for avoiding and minimizing impacts to migratory birds within and around the project area. Please be aware that since these are general guidelines, some of them may not be applicable to the current project design or they may have already been included in the project design.

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

We are happy to further discuss how SPLP can minimize impacts to these species. As a means to minimize impacts, please see the enclosed migratory bird general guidance document that was also provided to you in our March 19, 2014, letter.

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

Please contact Pamela Shellenberger or Brian Scofield of this office at (814) 234 4090 if you have any questions or require further assistance regarding this matter.

Sincerely,

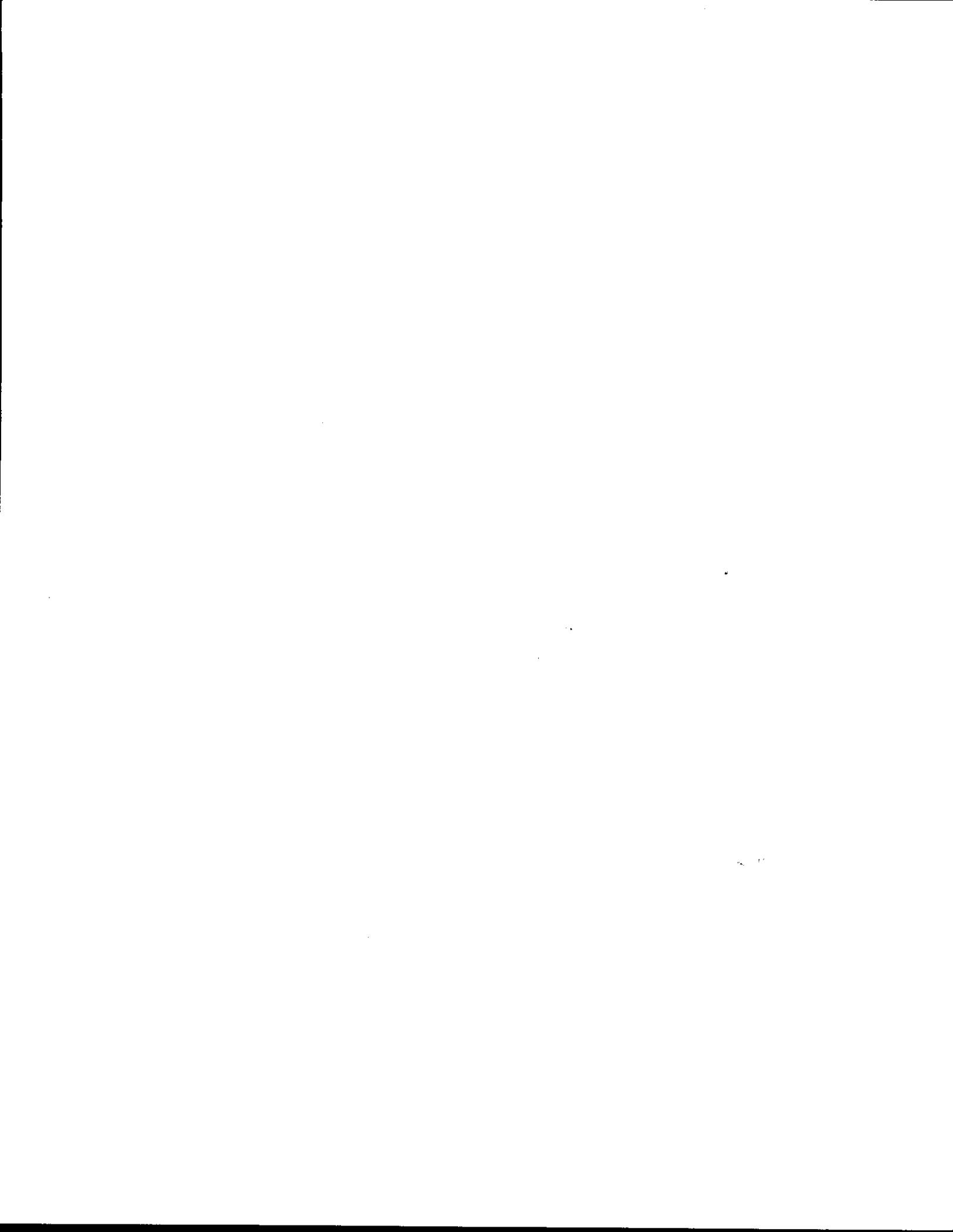


Lora Z. Lattanzi
Field Office Supervisor

Enclosure

cc:

Corps – W. Chandler
DEP – A. McDonald



**CALCULATION SHEET FOR
INDIANA BAT HABITAT COMPENSATION**
(revised 9/22/2014)

USFWS Project # 2014-0200 Date 04/26/2016
 Project Name: Pennsylvania Pipeline Project
 Project Location (township and county): Pennsylvania
 Project Type: Natural Gas Liquids Pipeline DEP permit # _____
 Hibernaculum and/or Maternity Colony Affected: Hartman Mine

Table 1. Calculation of Compensation Acres

IMPACT TYPE	IMPACT ACRES	MULTIPLIER ¹	COMPENSATION ACRES
Summer Habitat Loss²			
Known maternity habitat		1.5	
Known non-maternity habitat		1.0	
Potential habitat ³		0.5	
Swarming Habitat Loss⁴			
P2 or P3	258	1.5	387
P4		1.0	
Overlapping Habitat Loss⁵			
Known maternity and swarming habitat occur together: choose highest multiplier from above (maternity or swarming) for the impact, and add 1.0 to the multiplier			

¹ Multiplier provides for a PARTIAL offset of habitat impacts and assumes permanent habitat protection will occur in accordance with the *Indiana Bat Mitigation Guidance for Pennsylvania*. A substantially higher multiplier would be needed to fully offset habitat impacts.

² Loss of known summer habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31).

³ For coal mining projects having forest impacts ≥ 40 acres, applicants can either conduct mist-net surveys in accordance with the Service's survey guidelines OR assume presence of Indiana bats. When assuming presence, a seasonal restriction will apply, along with a 0.5:1 compensation ratio for forest impacts. Non-coal projects are evaluated on a case-by-case basis.

⁴ Swarming habitat is suitable habitat in the vicinity of an Indiana bat hibernaculum (generally 10-20 miles). Loss of swarming habitat assumes such loss will occur when bats are NOT present (i.e., between November 15 and March 31).

⁵ Loss of summer and swarming habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31).

Table 2. Calculation of Deposit when using the Indiana Bat Conservation Fund

Location of Impact (County)	Compensation Acres (from Table 1)	Cost/Acre ⁶	IBCF Deposit ⁷
Adams		TBD	
Armstrong/Butler		\$2,060	
Beaver/Lawrence		\$2,320	
Bedford		TBD	
Berks		TBD	
Blair	187.5	\$2,285	\$428,437.50
Centre		\$3,600	
Fayette		\$1,519	
Greene		\$1,223	
Huntingdon	136.5	\$3,631	\$495,631.50
Luzerne		\$3,716	
Mifflin		TBD	
Pike		\$8,100	
Somerset		\$2,247	
Washington		\$2,760	
York		TBD	
Cambria	63	\$1,250	\$78,750.00

* See Table 3 for cost/acre value

NOTE: Deposits to the IBCF are due prior to permit issuance. Provide documentation of the deposit to the USFWS and the permitting agency (e.g., PA DEP). An escrow account has been set up at the following institution to receive IBCF deposits.⁸

First Commonwealth Bank – Trust Division
 Attn: Brenda Alabran
 614 Philadelphia Street
 P.O. Box 698
 Indiana, Pennsylvania 15701
 724-463-6580 (phone)

Designate the deposit for: Indiana Bat Conservation Fund (Acct #710621004)

USFWS Concurrence: *Shaj Jattanzi* Date: *6/22/2016*

⁶ Cost/acre subject to change, based on a periodic re-evaluation of land comparable values by the Pennsylvania Game Commission. Cost per acre reflects land cost per acre, plus 20% for expenses associated with land acquisition (e.g., comparable values search, title search, transfer taxes, land survey, recording fees, etc.).

⁷ Multiply the number of Compensation Acres by the Cost/Acre to determine the amount to be submitted to the Indiana Bat Conservation Fund.

⁸ If you choose to set up an escrow account at another institution, do so in coordination with the Pennsylvania Game Commission.

Appendix D-2

PA Game Commission Correspondence

**(Note: Detailed reports and agency correspondence available online at:
<http://www.nab.usace.army.mil/Home/Public-Notices/Ops-Public-Notices/>)**



July 17, 2015

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

**Subject: PGC ID Number: 201312180001
Request for a No Impact Determination
Sunoco Pipeline, L.P. - Pennsylvania Pipeline Project (Previously Part of
the Mariner East 2 Pipeline Project)**

Dear Mr. Taucher:

Tetra Tech, Inc. (Tetra Tech) has been retained by Sunoco Pipeline, L.P. (SPLP) to conduct environmental field surveys and permitting services for the proposed Pennsylvania Pipeline Project (PPP) formerly part of the Mariner East 2 Pipeline Project (ME2). On behalf of SPLP, Tetra Tech is requesting a no impact determination from the Pennsylvania Game Commission (PGC) for the PPP.

A Large Project Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Request including a large project form, project description, and preliminary project USGS topographic mapping was initially provided to the PGC under the preliminary project name "Mariner East 2 Pipeline - Trans-Pennsylvania" on December 12, 2013. We received a response letter dated March 14, 2014 from PGC. That letter is included for reference as Attachment 1. The Mariner East 2 Project was originally going to encompass all of the project activities within the state of Pennsylvania (PA). After field activities began, the project was split into two separate and independent projects; the Ohio Pipeline Project (OPP) and the PPP. Initially, a 20-inch diameter pipeline would be installed within a 50-foot-wide right-of-way (ROW) from Houston, PA to Marcus Hook, PA (306 miles) and a second, up to 20-inch diameter pipeline, would be installed in the same ROW. The second line is proposed to be installed from SPLP's Delmont Station, Westmoreland County, Pennsylvania to the Marcus Hook facility, paralleling the initial line for approximately 255 miles. (Attachment 2).

PGC indicated that the following species or resources of concern were located within the vicinity of the Mariner East 2 Project: bald eagle (*Haliaeetus leucocephalus*), Indiana bat (*Myotis sodalis*), Allegheny woodrat (*Neotoma magister*), Eastern small-footed bat (*Myotis leibii*), Northern Harrier (*Circus cyaneus*), Northern long-eared bat (*Myotis septentrionalis*), silver-haired bat (*Lasionycteris noctivagans*), bald eagle (*Haliaeetus leucocephalus*), potential bat hibernacula, and wetlands located within the requested review area along the Little Conemaugh River, the Raystown Branch Juniata River, Marsh Creek, and Middle Creek.

Tetra Tech

661 Anderson Drive, Foster Plaza VII, Pittsburgh, PA 15220
Tel 412.921.7090 Fax 412.921.7090 www.tetrattech.com



PGC has removed the bald eagle from the state-listed threatened and endangered species list. Tetra Tech has directly coordinated with the US Fish and Wildlife Service (USFWS) regarding the bald eagle and will work within the framework of the USFWS's National Bald Eagle Management Guidelines.

The PPP does cross the Little Conemaugh River, the Raystown Branch Juniata River, Marsh Creek, and Middle Creek areas. SPLP has maintained an avoidance and minimization strategy for the entire Project to reduce or avoid impacts to wetlands. Therefore, impacts to these resources would be minimized to the maximum extent practical. PGC mentions that portions of the ME2 are located within State Game Lands. Sunoco is coordinating with PGC Land Management for areas of this project that cross State Game Lands. All appropriate license agreements will be obtained for public land crossing and conditions of those agreements followed.

PGC provided the location of a Northern Harrier Restriction Area (Attachment 3) and requested all site preparation, construction, reclamation, and future maintenance mowing be avoided between April 15 and August 31 to minimize potential impacts to Northern harriers and their habitat during the breeding and nesting season. Additionally, a seed mix was requested to be used post construction to ensure the establishment of beneficial herbaceous habitat for grassland species. The area to be disturbed is only a small portion, approximately 12.65 acres, of the restriction area, and other than roadways crosses all privately held lands. The majority of the areas crossed are currently pasture or agriculture and the land owner has control over what is planted. Mowing would occur on an as needed basis and be limited to where the line passes through forested habitats. SPLP feels that given the limited and temporary disturbance of construction, current land use of the area, and the nature of the easement agreements, that commitment to a seed mix restoration requirement is not practical. Also given the limited and temporary duration of construction and operational maintenance that will occur in this area, construction and mowing during the recommended restriction periods would also not adversely impact the species.

PGC noted that comments on the Indiana bat are deferred to USFWS. PGC also requested that winter tree clearing occur between November 1st and March 31st to minimize impacts to Northern long-eared bats and silver-haired bats. Tetra Tech understands that, as of May 1, 2015, PGC defers comment on the Northern long-eared bat to USFWS. Tetra Tech is coordinating with the USFWS regarding the Indiana bat and Northern long-eared bat and will submit an Indiana and Northern long-eared Bat Conservation Plan for the PPP. This coordination will ensure the project does not adversely impact these two species.

SPLP through coordination with the USFWS was provided two areas that would require tree clearing timing restrictions on the PPP due to the projects location within identified Indiana bat swarming areas (Attachment 4). Those areas are identified on maps provided in Attachment 4. In these areas the USFWS recommended tree clearing timing window of November 15 to March 31. To also provide protection to the silver-haired bat, SPLP will only clear trees in these areas between November 15 and March 31, as recommended by the PGC. That commitment will be presented on project plans and on the line list.

Tetra Tech

661 Anderson Drive, Foster Plaza VII, Pittsburgh, PA 15220
Tel 412.921.7090 Fax 412.921.7090 www.tetrattech.com



Outside of the swarming areas, SPLP has initiated surveys for the Indiana bat through mist netting surveys in accordance with the 2014 and 2015 Range-Wide Indiana Bat Summer Survey Guidelines and as outlined in the 2014 and 2015 survey conditions listed under the PGC Special Use Permit issued for the Project. These mist net surveys also survey for other bat species that use similar habitats and share similar life histories, such as the silver-haired bat and Northern long-eared bat. One silver-haired bat was captured in Indiana County during these surveys and is provided on Attachment 5. PGC has been provided the location in the Bat Measurement and Capture Data Form submittal and in the *2014 Summer Mist Net and Fall Portal Survey Summary Report* (December 2014). The location is 1,300 feet from the nearest project area (Attachment 5). Surveys continued into 2015, however no additional silver-haired bats have been located and that result will be reported within the 2015 report. Based on these results, removing the timing restriction on the remainder of the project areas that occur outside the defined swarming areas in regards to the silver-haired would not result in an impact to this species.

PGC indicated that abandoned mine features were present within the project area of ME2. PA Department of Environmental Protection's (PADEP) *Abandoned Mine Land (AML) Inventory Points* database was reviewed for the potential presence of abandoned mine features within PPP. Any mine features within the project area were evaluated for potential hibernacula and assessed per the *PGC Protocol for Assessing Bat Use of Potential Hibernacula*. No potential hibernacula were identified within PPP per the previously submitted 2014 summary report. Based on this result, the PPP is not expected to impact previously undiscovered bat hibernacula.

PGC provided details on areas to be surveyed for Eastern small-footed bat and Allegheny woodrat habitat. These surveys have been completed for the areas initially provided by PGC as well as additional areas along the re-route south of Altoona. Attached for your reference is the final report (Attachment 6) which includes a summary of the survey areas and activities as well as identified Allegheny woodrat potential activity centers (PACs) and activity centers (ACs) and potential Eastern small-footed bat habitat. The majority of the identified PACs, ACs, and Eastern small-footed bat habitat areas are being avoided by the Project and many of these areas occur along an existing SPLP pipeline corridor that the PPP is following. SPLP proposes to restore any identified Allegheny woodrat ACs and identified Eastern small-footed bat habitat to preexisting conditions as much as practical to ensure safe installation and operation of the project. Therefore, impacts to these species are expected to be minor and temporary.

On behalf of SPLP, Tetra Tech would like to request the PGC review of and concurrence with our no impacts determination for the Northern harrier, silver-haired bat, small-footed bat, potential bat hibernacula, and the Allegheny woodrat. Thank you for your assistance in this matter. If you have any questions regarding this request, please feel free to contact me at 412.921.8167 or preston.smith@tetrattech.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Smith', with a long horizontal flourish extending to the right.

Preston R. Smith
Manager, Wetlands and Ecological Services Department



Attachments:

- Pennsylvania Pipeline Project Maps
- PA Game Commission PNDI Response Package
- Northern Harrier Restriction Area Figure
- Indiana Bat Swarming Areas Figure
- Silver-haired Bat Capture Location Figure
- Allegheny Woodrat and Eastern Small-Footed Bat Survey Report

CC: Chris Embry, Sunoco Logistics
Matt Gordon, Sunoco Logistics
Brad Schaffer, Tetra Tech
Sandy Lare, Tetra Tech
File 112IC05958



January 15, 2016

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

**Subject: PGC ID Number: 201312180001
Request for Effects Determination Concurrence
Sunoco Pipeline, L.P. - Pennsylvania Pipeline Project**

Dear Mr. Taucher:

Tetra Tech, Inc. (Tetra Tech) has been retained by Sunoco Pipeline, L.P. (SPLP) to conduct environmental field surveys and permitting services for the Pennsylvania Pipeline Project (PPP). On behalf of SPLP, Tetra Tech is requesting effects determination concurrence from the Pennsylvania Game Commission (PGC) for the PPP.

On December 12, 2013 a Large Project Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Request including a large project form, project description, and preliminary project USGS topographic mapping was initially provided to the PGC under the preliminary project name "Mariner East 2 Pipeline - Trans-Pennsylvania". The Mariner East 2 Project was described as traversing the state of Pennsylvania. However, after field activities began, the project was split into two separate and independent projects; the PPP and the Ohio Pipeline Project (OPP) (Attachment 1). The PPP involves the phased installation of approximately 561 miles of two parallel pipelines within a 306-mile, 50-foot-wide right-of-way (ROW) from Houston, Washington County, Pennsylvania to SPLP's Marcus Hook facility in Delaware County, Pennsylvania with the purpose of interconnecting with existing SPLP Mariner East pipelines. Initially, a 20-inch diameter pipeline would be installed within the ROW from Houston to Marcus Hook (306 miles) and a second, up to 20-inch diameter pipeline, would be installed in the same ROW. The second line is proposed to be installed from SPLP's Delmont Station, Westmoreland County, Pennsylvania to the Marcus Hook facility, paralleling the initial line for approximately 255 miles.

We received a response letter dated March 14, 2014 from PGC. That letter is included for reference as Attachment 2. PGC indicated that the following species were located within the vicinity of the Mariner East 2 Project: Allegheny woodrat (*Neotoma magister*) and Eastern small-footed bat (*Myotis leibii*).

PGC also provided details on areas to be surveyed for Eastern small-footed bat and Allegheny woodrat habitat. As a result of these correspondences with the PGC, Allegheny woodrat and eastern small-footed bat habitat surveys were performed by Wildlife Specialist's biologists. These surveys were completed for the areas initially provided by PGC as well as additional areas along the re-route south of Altoona. The final report summarizing the survey findings has been previously submitted to PGC.

During further coordination and project review, PGC requested the submittal of Conservation Plans for the Allegheny woodrat and eastern small-footed bat that outline SPLP's commitment to avoidance, minimization, and mitigation measures to prevent impacts to these species within the Project area. Attachments 3 and 4, the Allegheny Woodrat Conservation Plan for the PPP and the Eastern Small-footed Bat Conservation Plan for the PPP, respectively, includes these commitments. From the onset of the Project, SPLP has instructed project designers to consider environmental impacts in regard to all aspects of the proposed Project and to avoid and minimize wherever possible while allowing safe installation. Pipeline engineers were provided a list of restrictions, recommendations, and requirements to consider during the design phase. Major considerations were co-location with existing utility corridors, limiting the

Tetra Tech

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Tel 412.921.7090 Fax 412.921.7090 www.tetrattech.com



construction corridor to the minimum width practicable, and avoidance and minimization of sensitive habitats.

Evidence of woodrat presence was found at 4 areas, Jacks Mountain 2, Jacks Mountain 3, Blacklog Mountain, and Bowers Mountain 2. Following construction, SPLP will restore habitat in temporary workspaces and create new potential woodrat habitat in the form of rock structures at the four survey areas containing AC's following the criteria stated in the PGC's BMPs. Five rock structures are proposed to be built within the four areas containing delineated woodrat habitat and ACs. The structures will be constructed along temporary ROW's, access roads, or workspaces, or in areas adjacent to these spaces based on an evaluation of the impacted landscape, land availability, and land owner approval.

Habitat surveys for small-footed bats identified 1.7 acres of habitat within the proposed LOD. SPLP proposes to prevent small-footed bats from accessing summer roosting habitat within the Project LOD to avoid any chance of incidental take that could occur during construction activities. During construction, SPLP will seal off these areas using a geotextile material such as silt fencing, mesh screening, or other appropriate materials. Additionally, following the completion of construction, SPLP will construct new roosting structures as close to the areas of impacted areas as possible. SPLP will construct twenty new roosting structures along temporary Right of Ways (ROWs), access roads, or temporary workspaces, or in areas adjacent to these spaces based on an evaluation of the landscape. These structures will be monitored for use for a period of three years or until bats are seen emerging from the structures.

Based on the information provide herein, the previously provided survey reports, the attached conservation plans, what is known about the presence and/or potential presence of the Allegheny woodrat and the eastern small-footed bat in the vicinity of the project areas, and SPLP's commitments to the protection and conservation of these species, it is Tetra Tech's conclusion that the PPP is not likely to impact the Allegheny woodrat and eastern small-footed bat. On behalf of SPLP, Tetra Tech would like to request the PGC's concurrence with this determination to satisfy State permit requirements.

Thank you for your assistance in this matter and we look forward to your review and concurrence. If you have any questions regarding this request, please feel free to contact me at 412.921.8167 or preston.smith@tetrattech.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Smith', with a long horizontal line extending to the right.

Preston R. Smith
Manager, Wetlands and Ecological Services Department

Attachments:

- Pennsylvania Pipeline Project Maps
- PA Game Commission PNDI Response Package
- Allegheny Woodrat Conservation Plan
- Eastern Small-footed Bat Conservation Plan

CC: Christopher Embry, Sunoco Logistics
Monica Styles, Sunoco Logistics
Matt Gordon, Sunoco Logistics
Brad Schaffer, Tetra Tech
Sandy Lare, Tetra Tech
File 112IC05958



COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

2001 ELMERTON AVENUE
HARRISBURG, PA 17110-9797

*"To manage all wild birds, mammals and their habitats
for current and future generations."*

ADMINISTRATIVE BUREAUS:

ADMINISTRATION.....	717-787-5670
HUMAN RESOURCES.....	717-787-7836
FISCAL MANAGEMENT.....	717-787-7314
CONTRACTS AND PROCUREMENT.....	717-787-6594
LICENSING.....	717-787-2084
OFFICE SERVICES.....	717-787-2116
WILDLIFE MANAGEMENT.....	717-787-5529
INFORMATION & EDUCATION.....	717-787-6286
WILDLIFE PROTECTION.....	717-783-6526
WILDLIFE HABITAT MANAGEMENT.....	717-787-6818
REAL ESTATE DIVISION.....	717-787-6568
AUTOMATED TECHNOLOGY SERVICES.....	717-787-4076

Division of Environmental
Planning and Habitat
Protection
717-783-5957

www.pgc.state.pa.us

June 8, 2016

PGC ID Number: 201312180001 (Update)

Preston Smith
Tetra Tech
661 Anderson Drive, Foster Plaza
Pittsburgh, Pa 15220
preston.smith@tetrattech.com

Re: Sunoco Pipeline, LP – Pennsylvania Pipeline Project (*Update*)
State Game Lands Nos. 46, 52, 71, 118, 147, 198, and 276
Large Project PNDI Review
Washington, Westmoreland, Indiana, Cambria, Blair, Huntingdon, Perry, Cumberland, Lebanon,
Lancaster, Berks, and Chester Counties, PA

Dear Mr. Smith,

Thank you for submitting your Pennsylvania Natural Diversity Inventory (PNDI) Large Project Environmental Review request. The Pennsylvania Game Commission (PGC) screened this project for potential impacts to species and resources of concern under PGC responsibility, which includes birds and mammals only. This is an update to the PNDI letter that was issued on August 18, 2015 based on the additional information provided to the PGC.

Potential Impact Anticipated

PNDI records indicate species or resources of concern are located in the vicinity of the project. The PGC has received and thoroughly reviewed the information that you provided to this office as well as PNDI data, and has determined that potential impacts to threatened, endangered, and species of special concern may be associated with your project. Therefore, additional measures are necessary to avoid potential impacts to the species listed below:

Scientific Name	Common Name	PA Status	Federal Status
<i>Myotis sodalis</i>	Indiana Bat	ENDANGERED	ENDANGERED
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	THREATENED	THREATENED
<i>Myotis leibii</i>	Eastern Small-footed Bat	THREATENED	NA
<i>Neotoma magister</i>	Allegheny Woodrat	THREATENED	NA
<i>Circus cyaneus</i>	Northern Harrier	THREATENED	NA
<i>Lasionycteris noctivagans</i>	Silver-haired Bat	SPECIAL CONCERN	NA

Indiana Bat and Northern Long-eared Bat

Indiana and Northern long-eared bats are a federally listed species under the jurisdiction of the U.S. Fish and Wildlife Service. As a result, our agency defers comments on potential impacts to Indiana and Northern long-eared bats to the U.S. Fish and Wildlife Service.

Eastern Small-footed Bat

The PGC has identified portions of the proposed project where potential eastern small-footed bat habitat may exist, and could be impacted by the proposed project. The PGC requested eastern small-footed bat habitat surveys be completed within these areas. Eastern small-footed bat habitat surveys were conducted in 2014 and 2015 to identify and delineate suitable roosting habitat. Rocky areas deemed suitable as eastern small-footed bat day roosts were identified within the project area. Mitigation for impacts to these rocky areas will consist of the construction and monitoring of 20 replacement roost structures following the details described in the approved mitigation plan.

Allegheny Woodrat

The PGC has identified portions of the proposed project where potential Allegheny woodrat habitat may exist, and could be impacted by the proposed project. The PGC requested Allegheny woodrat habitat surveys be completed within these areas. Allegheny woodrat habitat surveys were conducted in 2014 and 2015 to identify and delineate suitable woodrat habitat. Two areas surveyed contained suitable habitat with evidence of woodrat presence within the vicinity of the project area. Mitigation for impacts to these areas will consist of revegetation plantings, replacement travel corridors, and replacement rock structures following the details described in the approved mitigation plan.

Northern Harrier

In its March 14, 2014 response letter, the PGC requested a seasonal restriction in select areas to protect nesting northern harriers that have been documented in the vicinity of the proposed project. A habitat survey was conducted in 2014 which revealed the current land conditions at the areas in question are not suitable northern harrier habitat. Based on this information impacts to northern harriers is not likely. Therefore, no further coordination with the PGC is necessary for this species at this time.

Silver-haired Bats

Silver-haired bats are species of special concern, and therefore, not target species for additional surveys. However, because of their ecological significance, the PGC recommends that to the greatest extent practicable, all trees or dead snags greater than 5 inches in diameter at breast height that need to be harvested to facilitate the project (including any access roads or off-ROW work spaces) should be cut between November 1st and March 31st.

Potential Bat Hibernacula

In its March 14, 2014 response letter, the PGC requested potential bat hibernacula investigations. Desktop analysis revealed 12 potential bat hibernacula in the vicinity of the project. These 12

features were investigated during 2014 during which no bats were captured. Therefore no further coordination with the PGC is necessary for these features.

State Game Lands

Portions of the proposed project are located on State Game Lands Nos. 46, 52, 71, 118, 147, 198, and 276. Please contact Mr. Scott Tomlinson, Southwest Region Land Management Supervisor, at 724-238-9523 to discuss and coordinate the project on SGL 276, Mr. Robert Einodshofer, Southcentral Region Land Management Supervisor, at 814-643-1831 to discuss and coordinate the project on SGL 71, 118, 147, and 198, and Mr. Dave Mitchell, Southeast Region Land Management Supervisor, at 610-926-3136 to discuss and coordinate the project on SGL 46 and 52.

Wetlands

National Wetland Inventory Mapping (NWI) and/or aerial photos suggest that wetlands are located within the proposed project area. The PGC is requesting that the final project avoid, or at least minimize to the greatest extent practicable, any adverse impacts to these resources and their associated wildlife habitat.

This response represents the most up-to-date summary of the PNDI data files and is valid for two (2) years from the date of this letter. An absence of recorded information does not necessarily imply actual conditions on site. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered.

Should the proposed work continue beyond the period covered by this letter, please resubmit the project to the PGC at the following address as an "Update" (including an updated PNDI receipt, project narrative and accurate map):

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

If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements by the PGC for an additional 2 years.

This finding applies to impacts to birds and mammals only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure that the U.S. Fish and Wildlife Service, the PA Department of Conservation and Natural Resources, and/or the PA Fish and Boat Commission have been contacted regarding this project as directed by the online PNDI ER Tool found at www.naturalheritage.state.pa.us.

Please be sure to include the above-referenced PGC ID Number on any future correspondence with the PGC regarding this project.

Sincerely,



John Taucher
Division of Environmental Planning & Habitat Protection
Bureau of Wildlife Habitat Management
Phone: 717-787-4250, Extension 3632
Fax: 717-787-6957
E-mail: jotaucher@pa.gov

A PNHP Partner



JWT/jwt

cc: Anderson
Myers
Metz
Trusso
Vreeland
Morgan
Tomlinson
Einodshofer
Mitchell
Brauning
Turner
Gross
Barber
DiMatteo
Havens
Librandi Mumma
Ms. Pamela Shellenberger, U.S. Fish and Wildlife Service
H:\OIL&GAS_PNDI_Reviews\Statewide & Multi-Region Projects

Appendix D-3

PA Fish & Boat Commission Correspondence

**(Note: Detailed reports and agency correspondence available online at:
<http://www.nab.usace.army.mil/Home/Public-Notices/Ops-Public-Notices/>)**



August 21, 2015

Gary Smith
PA Fish & Boat Commission
Bureau of Wildlife Habitat Management
Division of Environmental Services
450 Robinson Lane
Bellefonte PA 16823

**Subject: PFBC SIR # 41856
Request for a No Impact Determination for Timber Rattlesnakes
Sunoco Pipeline, L.P. - Pennsylvania Pipeline Project (Previously Part of
the Mariner East 2 Pipeline Project)**

Dear Mr. Smith:

Tetra Tech, Inc. (Tetra Tech) has been retained by Sunoco Pipeline, L.P. (SPLP) to conduct environmental field surveys and permitting services for the proposed Pennsylvania Pipeline Project (PPP) formerly part of the Mariner East 2 Pipeline Project (ME2). On behalf of SPLP, Tetra Tech is requesting a no impact determination from the Pennsylvania Fish & Boat Commission (PGC) for the PPP.

A Large Project Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Request including a large project form, project description, and preliminary project USGS topographic mapping was initially provided to the PGC under the preliminary project name "Mariner East 2 Pipeline - Trans-Pennsylvania" on December 12, 2013. We received a response letters dated January 27, 2014 and May 21, 2014 from PFBC. Those letters are included for reference as Attachment 1. The Mariner East 2 Project was originally going to encompass all of the project activities within the state of Pennsylvania (PA). After field activities began, the project was split into two separate and independent projects; the Ohio Pipeline Project (OPP) and the PPP. Initially, a 20-inch diameter pipeline would be installed within a 50-foot-wide right-of-way (ROW) from Houston, PA to Marcus Hook, PA (306 miles) and a second, up to 20-inch diameter pipeline, would be installed in the same ROW. The second line is proposed to be installed from SPLP's Delmont Station, Westmoreland County, Pennsylvania to the Marcus Hook facility, paralleling the initial line for approximately 255 miles. (Attachment 2).

PGC indicated that the timber rattlesnake (*Crotalus horridus*) was located within the vicinity of the Mariner East 2 Project. Nineteen areas that potentially contain suitable habitat were identified within in the mountainous parts of Indiana, Cambria, Blair, Huntingdon, Juniata, Perry, and Cumberland Counties. Habitat assessments and presence/absence surveys were conducted from May 2014 to July 2015 by PFBC approved timber rattlesnake biologists following protocols during the appropriate survey periods based on PFBC guidelines. Results for these surveys are included the attached Timber Rattlesnake Habitat Assessment and Presence/Absence Survey Report (Attachment 3).

Tetra Tech

661 Anderson Drive, Foster Plaza VII, Pittsburgh, PA 15220
Tel 412.921.7090 **Fax** 412.921.7090 www.tetrattech.com



Gestation and den habitat was confirmed in 8 of the 19 survey areas. These habitats include 8 denning habitats and 15 gestation habitats. A total of 282 timber rattlesnakes were observed across 16 of the 19 survey areas. These results are summarized in Table 1. Five of the eight areas with confirmed denning habitat were determined to be within the Limit of Disturbance (LOD) and the proposed Project. Based upon these results, the project was shifted to avoid these areas. Similarly, six of the 15 confirmed gestation habitats were determined to be within the LOD of the proposed Project. However, avoidance of gestation habitats was considered to be unnecessary given additional mitigation measures presented in the attached Timber Rattlesnake Conservation Plan (Attachment 4). Monitoring for and relocation of timber rattlesnakes will also be an additional mitigation measure in 11 areas (see Attachment 4). As a general practice, following completion of construction, boulders and other rocky debris will be moved to the edge of the temporary cleared workspace during final cleanup activities to aid in providing habitat. These and other avoidance, minimization, and mitigation measures are discussed in detail in the attached Conservation Plan. Given these measures, impacts to timber rattlesnakes are expected to be minor and temporary.

PFBC identified the bog turtle as potentially occurring within the Project area. PFBC has delegated coordination/consultation of joint state/federally listed species impact reviews to the PA Field Office of the U.S. Fish and Wildlife Service (USFWS). Bog turtle surveys have been completed for the entire Project and coordination has been ongoing with USFWS.

PFBC also identified freshwater mussel species: yellow lampmussel (*Lampsilis cariosa*), rainbow mussel (*Villosa iris*), elktoe (*Alasmidonta marginata*), and triangle floater (*Alasmidonta undulata*); fish species: ghost shiner (*Notropis buchanani*) and brook stickleback (*Culaea inconstans*), and the Eastern red belly turtle (*Pseudemys rubriventris*) as potentially occurring within the Project area. These species will be addressed in a separate submittal, and at this time we would like review and determination concurrence in regards to only the Timber rattlesnake.

On behalf of SPLP, Tetra Tech would like to request the PFBC review of and concurrence with our no impacts determination for the timber rattlesnake. Thank you for your assistance in this matter. If you have any questions regarding this request, please feel free to contact me at 412.921.8167 or preston.smith@tetrattech.com.

Sincerely,

A handwritten signature in black ink, appearing to be 'P. Smith', written over a light blue horizontal line.

Preston R. Smith
Manager, Wetlands and Ecological Services Department



Attachments:

- PA Fish & Game Commission PNDI Response Package
- Pennsylvania Pipeline Project Map
- Timber Rattlesnake Habitat Assessment and Presence/Absence Survey Report
- Timber Rattlesnake Conservation Plan

CC: Chris Embry, Sunoco Logistics
Matt Gordon, Sunoco Logistics
Brad Schaffer, Tetra Tech
Sandy Lare, Tetra Tech
File 112IC05958



Pennsylvania Fish & Boat Commission

Division of Environmental Services

Natural Gas Section
450 Robinson Lane
Bellefonte, PA 16823

September 22, 2015

IN REPLY REFER TO
SIR# 41856

TETRA TECH
Preston Smith
661 Andersen Drive
Pittsburgh, Pennsylvania 15220

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No.
Sunoco Mariner East 2 Pipeline
ALLEGHENY County: - BERKS County: - BLAIR County: - CAMBRIA County: -
CHESTER County: - CUMBERLAND County: - DAUPHIN County: - DELAWARE
County: - HUNTINGDON County: - INDIANA County: - JUNIATA County: -
LANCASTER County: - LEBANON County: - PERRY County: - WASHINGTON
County: - WESTMORELAND County: - YORK County:**

Dear Preston Smith:

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search “potential conflict” or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

Timber Rattlesnake (*Crotalus horridus*) presence/absence surveys (Phase 2) were conducted at 19 surveys areas from May 2014 to July 2015. According to the resulting report, Timber Rattlesnake observations were made in 16 of 19 survey areas. Of the 8 confirmed denning habitats, 5 were within the LOD and resulted in reroutes of the project. Of the 15 confirmed gestation habitats, 6 were within the LOD and will be rebuilt according to PFBC guidelines following construction. As indicated in your Timber Rattlesnake Conservation Plan for the project, construction monitoring by a PFBC approved Timber Rattlesnake biologist will only be conducted during the Timber Rattlesnake active season (April 15 - October 15) in 11 monitoring areas determined based on habitat, the results of the 2014-2015 surveys, and in consultation with Stan Boder. Pre-construction surveys will occur within 48 hours of construction activities. If erosion control fabric is used, materials known to reduce the risk of snake

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To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.

entrapment will be used. All project personnel will be required to attend training. I concur with the results of this evaluation and the recommendations in the Timber Rattlesnake Conservation Plan; therefore, I do not foresee the proposed project resulting in adverse impacts to the Timber Rattlesnake.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

If you have any questions regarding this review, please contact Gary Smith at 814-279-3080 and refer to the SIR # 41856. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

A handwritten signature in cursive script that reads "Heather Smiles".

Heather A. Smiles, Chief
Natural Gas Section

HAS/GAS/dn

Appendix D-4

PA DCNR Correspondence

**(Note: Detailed reports and agency correspondence available online at:
<http://www.nab.usace.army.mil/Home/Public-Notices/Ops-Public-Notices/>)**



PITT-11-15-005

November 4, 2015

Project Number 112IC05958

Rebecca Bowen / Jason Ryndock / Frederick Sechler
PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street
Harrisburg, PA 17105

**Subject: Request for Effects Determination Concurrence
PNDI File Number: 22275, Update 22275
Sunoco Pipeline, L.P. - Pennsylvania Pipeline Project Multiple Counties**

Dear Ms. Bowen / Mr. Ryndock / Mr. Sechler:

Tetra Tech, Inc. (Tetra Tech) has been retained by Sunoco Pipeline, L.P. (SPLP) to conduct environmental field surveys and permitting services for the proposed Pennsylvania Pipeline Project (PPP) formerly part of the Mariner East 2 Pipeline Project (ME2). On behalf of SPLP, Tetra Tech is requesting effects determination concurrence from the Pennsylvania Department of Conservation and Natural Resources (PA DCNR).

On December 12, 2013 a Large Project Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Request including a large project form, project description, and preliminary project USGS topographic mapping was provided to the PA DCNR under the preliminary project name "Mariner East 2 Pipeline - Trans-Pennsylvania". The Mariner East 2 Project was described as traversing the state of Pennsylvania. The project was then split into two separate and independent projects; the PPP and the Ohio Pipeline Project (OPP) (Attachment 1). The initial PNDI response 22275 (Attachment 2) screened the original project route with a 1500 ft buffer on either side. The Updated PNDI response (Update 22275, Attachment 2) included all reroute areas outside of the initial project screening area including a large reroute south of Altoona.

The PPP involves the phased installation of approximately 561 miles of two parallel pipelines within a 306-mile, 50-foot-wide right-of-way (ROW) from Houston, Washington County, Pennsylvania to SPLP's Marcus Hook facility in Delaware County, Pennsylvania with the purpose of interconnecting with existing SPLP Mariner East pipelines. Initially, a 20-inch diameter pipeline would be installed within the ROW from Houston to Marcus Hook (306 miles) and a second, up to 20-inch diameter pipeline, would be installed in the same ROW. The second line is proposed to be installed from SPLP's Delmont Station, Westmoreland County, Pennsylvania to the Marcus Hook facility, paralleling the initial line for approximately 255 miles.

The botanical surveys for PPP included 23 AOCs (each AOC - consisting of at least one, and up to several, separate polygons) as directed by Mr. Jason Ryndock and Mr. Frederick Sechler of the PA DCNR, after their collaborative review of the Pennsylvania Natural Diversity Index (PNDI) database. The Botanical Survey Report (Attachment 3) summarizes the species biology and habitat preferences, methods, results, and conclusions of botanical surveys conducted from April 28, 2014 to September 16, 2015 to determine the presence or absence and extent of the SOSC listed on PNDI search receipt 22275 (Updated 22275) within the portions of the survey corridor that intersect with the assigned 23 AOCs of the Project. The surveys identified 63 SOSC populations of 12 distinct SOSC within the 23 AOCs that were traversed by the proposed Project route. A Serpentine Grassland Community of Concern (COC) was also identified within an AOC traversed by the Project.

The attached Conservation Plan (Attachment 4) provides SPLP's commitment to avoidance, minimization, and mitigation measures to prevent impacts to the listed SOSCs within the Project area. Proposed Project

Tetra Tech

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impacts were evaluated using both the current and proposed PA designations for the assigned state listed SOSC. Forty-seven populations of identified SOSC will not be impacted when evaluating using the current PA designations (PNHP 2015). When using the current PA status, two populations of PA Endangered (PE) SOSC, two populations of PA Threatened (PT) SOSC, and no populations of PA Rare (PR) SOSC are anticipated to be impacted. Forty-seven populations of identified SOSC will not be impacted when evaluating using the proposed PA designations. When using the proposed PA status, six populations of PE SOSC, no populations of PT SOSC, and eight populations of PR SOSC are anticipated to be impacted. Whether evaluating by current or proposed PA status the 2 state and federally listed Northeastern bulrush (*Scirpus ancistrochaetus*) populations identified during the 2014-2015 NE bulrush botanical survey will be avoided and will not be impacted by the Project. The Serpentine Grassland COC will not be impacted by the Project.

Significant effort was expended to utilize Best Management Practices (BMPs), such as temporary ROW “neck downs” or LOD reductions, HDD borings, and pipeline alignment rerouting, to avoid or minimize anticipated impacts to SOSC populations. Voluntary BMPs were utilized as often as practical to completely avoid or drastically reduce anticipated impacts to identified SOSC populations. Additional conservation measures such as topsoil segregation and replacement, “sod” excavation and replacement, and timber mat crossings will also be implemented to further avoid or minimize unavoidable anticipated impacts to specific SOSC populations. SPLP has utilized as many conservation measures as was practical to minimize total project impacts. Based on these avoidance, minimization, and mitigation measures, we do not anticipate significant impacts to any state-listed SOSC.

We hope this summary letter and the attached Botanical Survey Report assists you in completing an evaluation of the Project in relation to protected resources under PA DCNR-PNDI’s purview. We appreciate your timely review of this report and are requesting a no impact determination for the proposed Project.

If you have any questions or require additional information regarding the survey, report, or reference population identification, feel free to contact Preston Smith (preston.smith@tetrattech.com) at (412) 921-8167 or Korey McCluskey (korey.mccluskey@tetrattech.com) at (412) 920-8338.

Sincerely,
Tetra Tech, Inc.

A handwritten signature in black ink, appearing to read 'P. Smith'.

Preston Smith - Manager
Wetlands and Ecological Services Department

A handwritten signature in black ink, appearing to read 'K. McCluskey'.

Korey McCluskey
Senior Wetland Scientist

Attachments:

- PPP Project Overview Map (Attachment 1)
- PA DCNR Response Letters (Attachment 2)
- Botanical Survey Report (Attachment 3)
- Conservation Plan (Attachment 4)

CC: Chris Embry, Sunoco Logistics;
Matt Gordon, Sunoco Logistics;
Monica Styles, Sunoco Logistics;
Brad Schaeffer, Tetra Tech;
Sandy Lare, Tetra Tech;
Robin Dingle, Tetra Tech;
File 112IC05958

BUREAU OF FORESTRY

January 15, 2016

PNDI Large Project Number: 22275

Preston Smith

Korey McCluskey

Tetra Tech

661 Andersen Drive

Pittsburgh, PA 15220

Email: preston.smith@tetrattech.com, Korey.McCluskey@tetrattech.com (hard copy not to follow)

Re: Sunoco Mariner East 2 Pipeline

Trans-Pennsylvania (multiple counties and municipalities)

Dear Mr. Smith and Mr. McCluskey,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Large Project Number 22275 for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources of concern under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only. **The proposed project will affect State Forest Lands within the Gallitzin and Tuscarora State Forest Districts.** Further coordination with the Bureau of Forestry is required (see "Projects on State Forest Lands").

No Impact Anticipated per Survey (with Avoidance/Mitigation/Monitoring)

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. On March 13, 2014, DCNR requested a botanical survey for thirty-one state-listed species. TetraTech, Inc. conducted extensive botanical surveys in 2014 and 2015 throughout specific Areas of Concern (AOC) within the proposed pipeline project corridor. Sixty-three separate occurrences of PA Threatened & Endangered and PA plant species of concern were identified. Eight of the sixty-three occurrences were identified outside of the AOC's. Below is a summary of the botanical survey findings with anticipated impacts, recommended conservation actions, and final DCNR determinations.

AOC W10

One population of *Andropogon glomeratus* (Bushy Bluestem; PA Proposed Rare) was identified within the proposed limit-of-disturbance. Impacts to this population are unavoidable. However, it is unlikely this population is naturally occurring. Therefore, it is not a conservation concern. No mitigation is required.

DCNR Determination: No Impact Anticipated

Area between AOC W10 and AOC ALT W1

Four populations of *A. glomeratus* were documented within this area. Pop. 3 is located directly within the proposed right-of-way. Impacts to this population are unavoidable. However, it is unlikely this population is naturally occurring. Therefore, it is not a conservation concern. No mitigation is required.

Three populations of *Viola appalachiensis* (Appalachian Blue Violet; PA Proposed Rare) were also identified. Implementation of limit-of-disturbance (LOD) reductions or "neck downs" of the proposed temporary right-of-way (ROW) will avoid impacts to Pop. 1 and minimize impacts to Pop. 2 and Pop. 3. In addition, orange construction fencing will be installed to further safeguard Pop. 2. This species is fairly disturbance tolerant, and the majority of the population will likely persist.

One population of *Actaea podocarpa* (Mountain Bugbane; PA Proposed Rare) was found at a stream crossing location and cannot be directly avoided. Sunoco Pipeline, L.P. (SPLP) proposes to sod-excavate this population and restore the area with the same sod upon restoration (all within 24-48 hours). A botanist will be present on site to monitor all activities from pre-construction to restoration. The success of the restoration will be monitored two days following restoration activities and again

at 4 and 8 weeks (or, if sod-excavation is conducted outside the growing season, a similar monitoring schedule at the earliest appropriate time). A monitoring report will be submitted to DCNR for review detailing the success of the sod-excavation.

DCNR Determination: No Impact Anticipated (*A. glomeratus*); No Impact Anticipated per Avoidance (*V. appalachensis*); No Impact Anticipated per Avoidance with Monitoring (*A. podocarpa*)

AOC ALT W1

Four populations of *A. glomeratus* and two populations of *Scirpus ancistrochaetus* (Northeastern Bulrush; PA Proposed Threatened, Federally Listed) were identified within this area. *A. glomeratus* Pop. 5 and *S. ancistrochaetus* Pop. 1 will be avoided by HDD bore. DCNR will defer all management recommendations for the *S. ancistrochaetus* populations to U.S. Fish and Wildlife Service.

DCNR Determination: No Impact Anticipated (*A. glomeratus*); defer to USFWS (*S. ancistrochaetus*)

AOC W14

Twenty populations of *Antennaria virginica* were identified within AOC W14. Populations 1, 2, 11, 12, 13, 14, 18, 19, and 20 were observed outside of the proposed LOD and will not be impacted. Populations 4, 5, 6, 10, and 15 were observed within the proposed LOD, but will be avoided by narrowing the ROW.

Populations 3, 8, and 16 are unavoidable. A long temporary LOD reduction will be utilized at Pop. 17 to reduce impacts. In addition, minimal impacts will occur to Pop. 7 and Pop. 9. Soil segregation and replacement will be used to mitigate impacts to these populations. SPLP has agreed to conduct monitoring of these populations for three (3) years annually to document recolonization and success of the minimization and mitigation strategies.

DCNR determination: No Impact Anticipated per Avoidance/Mitigation/Monitoring

AOC E1

Five populations of *Carex shortiana* (Short's Sedge; PA Proposed Rare) were identified within AOC E1. Populations 1, 2, and 3 are located outside LOD, and will not be impacted. Populations 4 and 5 are located within LOD, but a HDD bore will be utilized to travel beneath these populations, avoiding any potential impacts.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E2

Six populations of *Polygala polygama* (Racemed Milkwort; PA Proposed Endangered) were documented within AOC E2 on Tuscarora State Forest. Populations 1, 2, 3, and 5 are located within the proposed temporary ROW for the project. Populations 4 and 6 are located outside of the proposed LOD and will not be impacted. Minimal impacts to populations 1, 2, 3, and 5 are expected, but will be further minimized with a pipeline realignment and LOD shift through the state forest. This route shift was routed to the south of the known populations to avoid the majority of impacts and has already been agreed upon by the PA DCNR and the Tuscarora SF District Forester. According to TetraTech, approximately 5-15 individuals will be impacted by this project (7 -22% of the population).

DCNR Determination: Since this population occurs on state forest land, DCNR Natural Heritage Section defers to and recommends further coordination with the Tuscarora State Forest District Forester Gene Odato and Kelly Sitch of DCNR.

AOC E3

Six populations of *Ribes missouriensis* (Missouri Gooseberry; PA Endangered) were identified within AOC E3. Populations 1, 2, and 3 were observed outside of the proposed LOD and therefore will not be impacted. Pop. 5 is located in the proposed corridor, but will be avoided with the implementation of LOD reduction or "neck downs" of the temporary ROW. Minimal impacts to Pop. 4 and Pop. 6 are anticipated, with narrow "neck downs" of the temporary ROW and relocation of proposed additional work spaces serving as minimization measures.

DCNR Determination: No Impact Anticipated per Avoidance

conserve

sustain

enjoy

AOC E4

One population of *R. missouriensis* was documented within AOC E4. It is outside the LOD and will not be impacted by this project.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E6

Four populations of *Opuntia humifusa* (Eastern Prickly-pear Cactus; PA Rare) were identified within AOC E6. All four populations were observed outside of the proposed LOD and therefore will not be impacted.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E14

A survey for *Carex aquatilis* (Water Sedge; PA Threatened) was conducted in AOC E14 in Berks County, PA. A population of *C. aquatilis* was previously documented at this site. No *C. aquatilis* was found within AOC E14, but *C. stricta* (tussock sedge), a similarly looking species, was identified. A voucher specimen was sent to Carnegie Museum for identification confirmation. The sedge was confirmed to be *C. stricta*. Therefore, no impacts to any species within DCNR's jurisdiction within AOC E14 are anticipated.

DCNR Determination: No Impact Anticipated per Survey

AOC E17

Two populations of *Desmodium nuttallii* (Nuttall's Tick-trefoil; PA Proposed Threatened) were identified within AOC E17. These populations were observed outside of the proposed LOD and will not be impacted.

DCNR Determination: No Impact Anticipated per Avoidance

AOC E19

Three populations of *Packera anonyma* (Plain Ragwort; PA Rare) and two populations of *Phemeranthus teretifolius* (Round-leaved Fame-flower; PA Threatened) were found within AOC E19. A serpentine grassland community of concern was also delineated. The populations and associated plant community are located outside of the proposed LOD and will not be impacted.

DCNR Determination: No Impact Anticipated per Avoidance

Per SPLP's agreements to avoid, minimize impacts, and conduct mitigation and monitoring of the PA Threatened and Endangered and PA plant species of concern as described above, DCNR has determined that no impact is likely. DCNR looks forward to receiving monitoring reports for the *Actaea podocarpa* and *Antennaria virginica* populations.

PROJECTS ON STATE FOREST LANDS:

A portion of this project takes place on the Tuscarora State Forest (District 3). The DCNR Bureau of Forestry's *State Forest Resource Management Plan* sets forth guidelines for ecologically-sound management of State Forest Lands and resources including protection of wetlands, wildlife, native wild plants and invasive species management. **This letter applies to PNDI impacts only and does not authorize the initiation of any work on State Forest Lands. Further coordination with the Bureau of Forestry is required.** If you have not already done so, please contact Gene Odato, District Forester for Tuscarora State Forest, at 717-536-3191, and Terrence G. Stemmler, District Forester for Gallitzin State Forest at 814-472-1862, for additional information.

conserve

sustain

enjoy

DCNR recommends the following steps to help prevent the spread of invasive species:

- The area of disturbance should be minimized to the fullest extent that would allow for construction. This will help to lessen the area of soil and vegetation disturbance associated with this project.
- If possible, please clean all construction equipment and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds from the equipment and undercarriages of the vehicles that may have been picked up at other sites.
- Avoid using seed mixes that include invasive plant species (e.g. crown vetch) to re-vegetate the area. Please also attempt to use weed-free straw or hay mixes when possible. More information about Pennsylvania invasive plants can be found here: <http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm>

This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Ecological Information Specialists, Jason Ryndock (717-705-2822; c.jryndock@pa.gov) or Frederick Sechler (717-705-2823; c-frsechle@pa.gov).

Sincerely,



Greg Podnieszinski, Section Chief
Natural Heritage Section, DCNR Bureau of Forestry