

**ATTACHMENT 14
NORTHEAST-POCONO RELIABILITY PROJECT
AGENCY COORDINATION**

On October 20, 2011, information regarding the Northeast-Pocono Reliability Project was provided to the U.S Fish and Wildlife Service (USFWS), the Pennsylvania Fish and Boat Commission (PFBC), the Pennsylvania Game Commission (PGC), and the Pennsylvania Department of Conservation and Natural Resources (DCNR). This information was provided in accordance with the Pennsylvania Natural Heritage Program's Pennsylvania Natural Diversity Inventory (PNDI) program, which provides information on the location and status of important ecological resources such as plants, mammals, fish, insects, and natural communities. Correspondences from these agencies regarding the potential presence of these ecological resources within the project area are provided in this attachment.

Wetlands and waterways within the right-of-way of the Northeast-Pocono Reliability Project have been delineated using PADEP and USACE approved methodologies. The findings from the delineation are being developed into a Wetland Delineation Report that will be filed with the PADEP/USACE Joint Permit Application required for the construction of this project. Information on the location of these features has been used by project engineers in the placement of transmission poles and alignment of access roads. Through the use of this information, only nine (9) poles of an estimated 414 total poles would be located in a wetland area. Evaluation of the development of temporary versus permanent access roads through wetlands and across waterways is being conducted by project engineers. Unavoidable impacts to these features will be reviewed with PADEP and USACE to determine the form and level of mitigation that will be required. Pre-application meetings with these agencies have been coordinated and discussions regarding the project are on-going.



United States Department of the Interior



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

January 9, 2012

David Yezuita
URS Corporation
335 Commerce Drive, Suite 300
Fort Washington, PA 19034-2623

RE: USFWS Project #2012-0077

Dear Mr. Yezuita:

This responds to your letters of October 20, 2011, which provided information about the area affected by the proposed PPL Electric Utilities Northeast/Pocono Reliability Projects. Three projects were submitted as Jenkins Substation to West Pocono Substation 230 kv Transmission Line, West Pocono Substation to North Pocono Substation 230 kv Transmission Line and North Pocono Substation to Paupack Substation 230 kv Transmission Line. The three projects are contiguous and the forest impacts are cumulative, therefore the three submissions will be reviewed by this agency as one project. The project is located in Luzerne, Lackawanna, and Wayne Counties, Pennsylvania. The project area is within the range of the federally listed endangered Indiana bat (*Myotis sodalis*). 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.*), the Migratory Bird Treaty Act (16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended) and the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended; 16 U.S.C. 668-668d) to ensure the protection of endangered and threatened species.

Indiana Bats

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

Land-clearing, especially of forested areas, may adversely affect Indiana bats by killing, injuring or harassing roosting bats, and by removing or reducing the quality of foraging and roosting habitat. Due to the anticipated impacts of the 60 mile project to 1000 acres of forested habitat, an Indiana bat survey should be conducted by a qualified surveyor (list enclosed) in accordance with the enclosed *Mist Netting Guidelines*. If any Indiana bats are captured, they should be tracked using radio-telemetry to identify roosting and foraging areas. This information will assist you in completing your analysis of the effects of the project on Indiana bats. Prior to

undertaking this survey, a study plan should be submitted to the Service for review. Following completion of the survey, results should also be submitted to the Service for review and concurrence.

Should Indiana bats be found during the survey, further consultation with the Service will be necessary, including the submission of detailed project plans, and an analysis of alternatives to avoid and minimize adverse effects.

Assessment of Risks to Migratory Birds including Bald and Golden Eagles

The Fish and Wildlife Service (Service) is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species. The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for authorizing incidental take, the Service recognizes that some birds may be killed even if all reasonable measures to avoid take are implemented. Unless the take is authorized, it is not possible to absolve individuals, companies or agencies from liability (even if they implement avian mortality avoidance or similar conservation measures). However, the Office of Law Enforcement focuses enforcement action on those individuals, companies, or agencies that take migratory birds with disregard for their actions and the law.

In addition to the MBTA, bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (Eagle Act), which prohibits killing; selling; or otherwise harming eagles, their nests, or their eggs. The Eagle Act also includes provisions not included in the MBTA, including the protection of unoccupied nests and a definition of take that prohibits disturbing eagles. The Service recommends that applicants carefully evaluate their proposed project in light of the *National Bald Eagle Management Guidelines* to determine whether or not eagles might be disturbed as a direct or indirect result of the project. These guidelines as well as additional eagle information are available at <http://www.fws.gov/migratorybirds/BaldEagle.htm>

The potential exists for avian mortality from electrocutions or collisions with power lines as well as direct impacts from habitat loss for wintering, migrating, and breeding migratory birds and indirect impacts from fragmentation, site avoidance, and disturbance of birds within the project boundaries. Electrocutions from power lines are of particular concern to raptors, as their size, hunting strategy, and nesting preferences make them particularly vulnerable. Other species, such as corvids (crows and ravens) and cormorants also show an affinity for nesting on power lines. Collisions are most common at night, or under low visibility conditions, because migratory birds and land birds either cannot see the utility lines, or they lack the ability to negotiate obstacles quickly enough to avoid them. 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.

The Avian Power Line Interaction Committee (APLIC; www.aplic.org) and the Service (<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>) have developed guidelines for power lines to minimize impacts from existing facilities and in the construction of

new utility and energy systems and associated infrastructure (APLIC 1994, 1996, and 2006; APLIC and Service 2005). In addition to those recommendations and suggestions, we offer the following recommendations to avoid and minimize impacts to migratory birds within and around the project area.

1. Develop an Avian Protection Plan that minimizes the risk of electrocution, collision, and nest disturbance for migratory birds (APLIC and Service 2005).
2. Minimize the risk of bird electrocutions by using horizontal and vertical separation between energized and/or grounded parts that allows sufficient clearance for wrist-to-wrist (flesh-to-flesh) and head-to-foot (flesh-to-flesh) clearance for the largest migratory birds in the project area (the standard is 60 inches of horizontal separation and 40-48 inches of vertical separation for eagles) and apply insulating conductors on corner and transformer poles. Apply covers on phases or grounds where adequate separation is not feasible (*e.g.*, insulator/conductor covers, bushing covers, arrester covers, cutout covers, jumper wire covers).
3. Minimize the risk of collisions by marking the wires to increase visibility to flying birds (*e.g.*, hanging markers, bird flight diverters, aviation marker balls).
4. Minimize land and vegetation disturbance and reduce habitat fragmentation during project design and construction, especially if habitat cannot be fully restored after construction. Where practicable, concentrate construction activities, infrastructure, and man-made structures (*e.g.*, poles, roads) on lands already altered or cultivated, and away from areas of intact and healthy native habitats. Co-locate roads, staging areas, and other infrastructure in or immediately adjacent to already-disturbed areas (*e.g.*, existing rights-of-way, agricultural fields). If co-location is not feasible, select fragmented or degraded habitats rather than relatively intact areas.
5. Where disturbance is necessary, clear natural or semi-natural habitats (*e.g.*, forests, woodlots, reverting fields, shrubby areas) and perform maintenance activities (*e.g.*, mowing) between September 1 and March 31, which is outside the nesting season for most native bird species. Without undertaking specific analysis of breeding species and their respective nesting seasons on the project site, implementation of this seasonal restriction will avoid take of most breeding birds, their nests, and their young (*i.e.*, eggs, hatchlings, fledglings).
6. Avoid permanent habitat alterations in areas where birds are highly concentrated or where sizable prey bases exist. Avoid establishing sizable structures along known bird migration pathways or known daily movement flyways (*e.g.*, between roosting and feeding areas). Examples of high concentration areas for birds are wetlands, State or Federal refuges, Audubon Important Bird Areas, private duck clubs, rookeries, roosts, and riparian areas.
7. Develop a habitat restoration plan for the proposed site that avoids or minimizes negative impacts on vulnerable wildlife. Use only plant species that are native to the local area for revegetation of the project area.

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

If you have any questions regarding this matter, please contact Kim Faulds of my staff at 814-234-4090.

Sincerely,

A handwritten signature in black ink, appearing to read 'Clinton Riley', written over a faint circular stamp or watermark.

Clinton Riley
Field Office Supervisor

Enclosures



Pennsylvania Fish & Boat Commission

Division of Environmental Services
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823-9620
(814) 359-5237 Fax: (814) 359-5175

November 21, 2011

IN REPLY REFER TO
SIR# 37459

DAVID YEZUITA
URS CORPORATION
335 COMMERCE DRIVE, SUITE 300
FORT WASHINGTON, PA 19034

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PPL - JENKINS SUBSTATION TO WEST POCONO SUBSTATION
PLAINS, BEAR CREEK, BUCK Townships, LUZERNE County, Pennsylvania**

Dear Mr. YEZUITA:

I have reviewed the map accompanying your recent correspondence, which concerns the above-referenced project. Based on records maintained in the Pennsylvania Natural Diversity Inventory (PNDI) database and Pennsylvania Fish & Boat Commission (PFBC) files, the **timber rattlesnake (*Crotalus horridus*, PA candidate)** is known from the vicinity of the proposed project site. Timber rattlesnakes occur in the forested, mountainous regions of the Commonwealth. They prefer forested areas to forage for small mammals (e.g., mice and chipmunks) and southerly-facing slopes for hibernating and other thermoregulatory activities. The timber rattlesnake is threatened by habitat loss/alteration, wanton killing, and poaching.

Given the proximity of the project to known critical timber rattlesnake habitat, we request that a timber rattlesnake habitat assessment be conducted in the project area by a *PFBC recognized/qualified timber rattlesnake surveyor*. We have included the list of PFBC recognized/qualified surveyors and habitat assessment protocol for your convenience. Upon completion of the habitat survey, the qualified rattlesnake biologist is to submit a report to this office (Natural Diversity Section) for review and comment. The habitat survey report should include color photographs of the project area (keyed to a site map or diagram) and a description of habitats occurring within the immediate area to be developed (**including access roads**), as well as the surrounding area. Potential timber rattlesnake critical habitat (denning/gestating areas) should be photographed and mapped accordingly. In addition, the report should also include detailed project plans and maps with a description of the proposed work (including access roads), project impacts and alternatives. Pending the review of this information, a survey targeting the presence of the timber rattlesnake in the project area and/or other project modifications may be requested.

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SIR #37459
YEZUITA
Page 2

In any future correspondence with us regarding this specific project, please contact Bob Morgan at 814-359-5129 and refer to the SIR number above. Thank you for your cooperation and attention to this matter of timber rattlesnake conservation.

Sincerely,


Christopher A. Urban, Chief
Natural Diversity Section

CAU/RTM/mr

Enclosures (2)

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

QUALIFIED TIMBER RATTLESNAKE SURVEYORS

The following list includes persons known to the Pennsylvania Fish and Boat Commission whom possess skills and have experience in properly searching for and finding timber rattlesnakes (*Crotalus horridus*) and in identifying their critical habitat. This information is not to be construed as an endorsement of individuals or firms by the Pennsylvania Fish and Boat Commission or any of its employees. Persons not on this list but who have documented experience in conducting scientific studies of, or successful searches for, timber rattlesnakes and their critical habitat may submit their qualifications to the Natural Diversity Section for review and possible inclusion as a recognized biologist/surveyor. Each person added to or deleted from this list shall be at the sole discretion of the Pennsylvania Fish and Boat Commission. This list is subject to revision at any time without prior notice. Any individuals handling, collecting, or otherwise removing timber rattlesnakes from their natural habitat, even if on a temporary basis for relocation, must first obtain a Scientific Collector's Permit from the Pennsylvania Fish and Boat Commission. All permitted collector's encounters with timber rattlesnakes must be reported in writing to the Pennsylvania Fish and Boat Commission's Natural Diversity Section.

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established 1866

Pennsylvania Fish & Boat Commission

Division of Environmental Services
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823-9620
(814) 359-5237 Fax: (814) 359-5175

November 21, 2011

IN REPLY REFER TO

SIR# 37461

DAVID YEZUITA
URS CORPORATION
335 COMMERCE DRIVE, SUITE 300
FORT WASHINGTON, PA 19034

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PPL - WEST POCONO TO NORTH POCONO SUBSTATION
BUCK, CLIFTON, LEHIGH Townships
LACKAWANNA, LUZERNE Counties, Pennsylvania**

Dear Mr. YEZUITA:

I have reviewed the map accompanying your recent correspondence, which concerns the above-referenced project. Based on records maintained in the Pennsylvania Natural Diversity Inventory (PNDI) database and Pennsylvania Fish & Boat Commission (PFBC) files, the **timber rattlesnake (*Crotalus horridus*, PA candidate)** is known from the vicinity of the proposed project's southern terminus. Timber rattlesnakes occur in the forested, mountainous regions of the Commonwealth. They prefer forested areas to forage for small mammals (e.g., mice and chipmunks) and southerly-facing slopes for hibernating and other thermoregulatory activities. The timber rattlesnake is threatened by habitat loss/alteration, wanton killing, and poaching.

There have been observations of timber rattlesnakes in the vicinity of the project area, but based on our review of the information you sent as well as mapping overlays, **we do not anticipate any direct adverse impacts to the timber rattlesnake from the proposed project.** However, the project areas could be used as foraging habitat for timber rattlesnakes and this warrants some concern about rattlesnake-human conflicts. Although the nature of the timber rattlesnake is rather docile, it can be dangerous if cornered or handled. Therefore, the workers should be mindful of the presence of the snakes in the area. Rattlesnakes are attracted to open, rocky, log-strewn areas for basking and forested areas with thick deciduous leaf litter that tend to support high populations of rodents. We recommend that the workers responsible for implementing this project be advised that timber rattlesnakes may be encountered and that avoidance is the best means of minimizing risks to personal safety. These workers should also be advised that the timber rattlesnake is a state protected species and is not to be harmed. Killing of timber rattlesnakes without a proper permit is prohibited by the Commission pursuant to Chapter 79.6, subsection 2102 (b) of the Fishing and Boating Regulations. If any timber rattlesnakes are observed on-site, please notify this office.

Note that this office performed no field inspection of the project area. Consequently, comments in this letter are not meant to address other issues or concerns that might arise concerning matters under Pennsylvania Fish and Boat Commission jurisdiction or that of other authorities. If you have any

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questions regarding this response, please contact Bob Morgan at 814 359 5129 and **refer to the SIR number at the top of this letter**. Thank you for your cooperation and attention to this matter of endangered species conservation and habitat protection.

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher A. Urban". The signature is written in a cursive style with a large initial "C".

Christopher A. Urban, Chief
Natural Diversity Section

CAU/RTM/mr

Cc: Mark Faulkenberry, DCNR



Pennsylvania Fish & Boat Commission

FAX to: 215-367-1000

Division of Environmental Services
Natural Diversity Section
450 Robinson Lane
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(814) 359-5237 Fax: (814) 359-5175

established 1866

May 14, 2012

IN REPLY REFER TO
SIR # 38551

DAVID YEZUITA
URS CORPORATION
335 COMMERCE DRIVE, SUITE 300
FORT WASHINGTON, PA 19034-2623

**RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species
PPL NORTHEAST/POCONO RELIABILITY PROJECT; WEST POCONO SUBSTATION 69kV
CONNECTOR LINES
UPDATE TO SIR# 37459
PNDI Search Number (if available):
BUCK TOBYHANNA Township/Borough, LUZERNE MONROE County, Pennsylvania**

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. The absence of recorded information from our files does not necessarily imply actual conditions on site. Future field investigations could alter this determination. The information contained in our files is routinely updated. A Species Impact Review is valid for one year only.

X **NO ADVERSE IMPACTS EXPECTED FROM THE PROPOSED PROJECT**

X Except for occasional transient species, rare, candidate, threatened or endangered species under our jurisdiction are not known to exist in the vicinity of the project area. Therefore, no biological assessment or further consultation regarding rare species is needed with the Commission. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

___ An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

If you have any questions regarding this review, please contact the biologist indicated below:

- | | | | |
|---------------------|--------------|---------------------|--------------|
| ___ Chris Urban | 814-359-5113 | ___ Kathy Gipe | 814-359-5186 |
| ___ Douglas Fischer | 814-359-5195 | <u>X</u> Bob Morgan | 814-359-5129 |

Thank you in advance for your cooperation and attention to this important matter of species conservation and habitat protection.

SIGNATURE: _____

DATE: May 14, 2012

Christopher A. Urban
Chief, Natural Diversity Section

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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
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PROCUREMENT.....717-787-6594
LICENSING.....717-787-2084
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WILDLIFE HABITAT
MANAGEMENT.....717-787-6818
REAL ESTATE DIVISION.....717-787-6568
AUTOMATED TECHNOLOGY
SERVICES.....717-787-4076

www.pgc.state.pa.us

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

December 30, 2011

Large Project PNDI Review

Mr. David Yezuita
URS Corporation
335 Commerce Drive
Fort Washington, Pennsylvania 19034

Re: PPL –Jenkins Substation to West Pocono Substation 230 kV Transmission Line
Plains, Bear Creek, and Buck Township, Luzerne County, Pennsylvania

Dear Mr. Yezuita,

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.

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 birds and mammals 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
<i>Myotis leibii</i>	Eastern Small-footed Bat	THREATENED
<i>Myotis septentrionalis</i>	Northern myotis	SPECIAL CONCERN

Next Steps

The following surveys should be performed for above listed species so that a more accurate determination can be made:

- *Eastern small-footed bat habitat assessment.* All rocky habitat that may offer suitable roost sites for eastern small-footed bats should be completely delineated (with GIS shapefiles provided) and photo-documented. Any rocky habitat that is identified, but not considered to be suitable eastern small-footed bat roost habitat should also be photo-documented and a written narrative shall be provided describing the reason(s) for its non-suitability.

- *Bat mist netting with telemetry for state threatened and endangered species.* The project area shall be surveyed between May 15 and August 15 following the *U.S. Fish and Wildlife Services Indiana Bat Mist-Netting Guidelines* (attached). Mist net surveys should be conducted by a qualified bat surveyor listed on the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list. Suitable eastern small-footed bats that may be captured during the mist net survey should be radio-tracked following the *PGC's Small-footed Myotis Mist-Net/Telemetry Protocol* (attached).

A copy of the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list can be obtained from the U.S. Fish and Wildlife Services State College, PA field office. A PGC Special Use Permit will need to be obtained by the consultant prior to conducting any of the above listed surveys that involve the handling of bats. Finally, a draft mist-net survey plan shall be submitted to the PGC for review and concurrence prior to initiating the above listed surveys.

Additionally, portions of the above referenced project are located on and adjacent to **State Game Lands #91**. Please contact Northeast Regional Office at (570) 675-1143 to discuss potential impacts to State Game Lands that may have occurred as a result of this project and to determine if any mitigation efforts are required.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for an additional year.

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.

Sincerely,



Olivia A. Mowery
Environmental Planner
Division of Environmental Planning & Habitat Protection
Bureau of Wildlife Habitat Management
Phone: 717-787-4250, Extension 3128
Fax: 717-787-6957
E-mail: OMowery@pa.gov

A PNHP Partner



OAM/oam

Enclosures: *USFWS Indiana Bat Mist-netting Guidelines*
PGC Small-footed Myotis Mist-Net/Telemetry Protocol

cc: Librandi Mumma
DuBrock
Brauning
Butchkoski
Turner
Schweitzer
Sussenbach
File



COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

2001 ELMERTON AVENUE
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for current and future generations."*

ADMINISTRATIVE BUREAUS:

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SERVICES.....	717-787-4076

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

May 3, 2012

Large Project PNDI Review

Mr. David Yezuita
URS Corporation
335 Commerce Drive
Fort Washington, Pennsylvania 19034

Re: PPL –West Pocono Substation 69 kV Connector Lines
Buck Township, Luzerne County and Tobyhanna Township, Monroe County
Pennsylvania

Dear Mr. Yezuita,

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.

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 birds and mammals 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
<i>Myotis leibii</i>	Eastern Small-footed Bat	THREATENED

The PGC recognizes that there are currently two alternatives are being considered for the location West Pocono Substation 69 kV Connector Lines. One option is located on the north side of State Route 115 and the other is located on the south side of State Route 115.

Next Steps

Since both alternatives have potential impacts to the above listed species, the following surveys should be performed so that a more accurate determination can be made:

- *Eastern small-footed bat habitat assessment.* All rocky habitat that may offer suitable roost sites for eastern small-footed bats should be completely delineated (with GIS shapefiles provided) and photo-documented. Any rocky habitat that is identified, but not

considered to be suitable eastern small-footed bat roost habitat should also be photo-documented and a written narrative shall be provided describing the reason(s) for its non-suitability.

- *Bat mist netting with telemetry for state threatened and endangered species.* The project area shall be surveyed between May 15 and August 15 following the *U.S. Fish and Wildlife Services Indiana Bat Mist-Netting Guidelines* (attached). Mist net surveys should be conducted by a qualified bat surveyor listed on the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list. Suitable eastern small-footed bats that may be captured during the mist net survey should be radio-tracked following the *PGC's Small-footed Myotis Mist-Net/Telemetry Protocol* (attached). A copy of the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list can be obtained from the U.S. Fish and Wildlife Services State College, PA field office. A PGC Special Use Permit will need to be obtained by the consultant prior to conducting any of the above listed surveys that involve the handling of bats. Finally, a draft mist-net survey plan shall be submitted to the PGC for review and concurrence prior to initiating the above listed surveys.

Additionally, portions of the **southern option** are located on and adjacent to **State Game Lands #91**. Please contact Northeast Regional Office at (570) 675-1143 to discuss potential impacts to State Game Lands that may have occurred as a result of this project and to determine if any mitigation efforts are required.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for an additional year.

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.

Sincerely,



Olivia A. Mowery
Environmental Planner
Division of Environmental Planning & Habitat Protection
Bureau of Wildlife Habitat Management
Phone: 717-787-4250, Extension 3128
Fax: 717-787-6957

E-mail: OMowery@pa.gov

A PNHP Partner



Pennsylvania Natural Heritage Program

OAM/oam

Enclosures: *USFWS Indiana Bat Mist-netting Guidelines*
PGC Small-footed Myotis Mist-Net/Telemetry Protocol

cc: Librandi Mumma
Conway
Sussenbach
File



COMMONWEALTH OF PENNSYLVANIA
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717-783-5957

December 30, 2011

Large Project PNDI Review

Mr. David Yezuita
URS Corporation
335 Commerce Drive
Fort Washington, Pennsylvania 19034

Re: PPL – Northeast/Pocono Reliability Project
West Pocono Substation to North Pocono Substation 230 kV Transmission Line
Buck Township, Luzerne County, Pennsylvania
Thornhurst, Clifton, and Covington Townships, Lackawanna County, Pennsylvania
Sterling and Lehigh Townships, Wayne County, Pennsylvania

Dear Mr. Yezuita,

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.

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 birds and mammals 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
<i>Myotis leibii</i>	Eastern Small-footed Bat	THREATENED

Next Steps

The following survey should be performed for above listed species so that a more accurate determination can be made:

- *Bat mist netting with telemetry for state threatened and endangered species.* The project area shall be surveyed between May 15 and August 15 following the *U.S. Fish and Wildlife Services Indiana Bat Mist-Netting Guidelines* (attached). Mist net surveys should be conducted by a qualified bat surveyor listed on the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list. Suitable eastern small-footed bats that may

be captured during the mist net survey should be radio-tracked following the *PGC's Small-footed Myotis Mist-Net/Telemetry Protocol* (attached).

A copy of the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list can be obtained from the U.S. Fish and Wildlife Services State College, PA field office. A PGC Special Use Permit will need to be obtained by the consultant prior to conducting any of the above listed surveys that involve the handling of bats. Finally, a draft mist-net survey plan shall be submitted to the PGC for review and concurrence prior to initiating the above listed surveys.

Additionally, portions of the above referenced project are located on and adjacent to **State Game Lands #135**. Please contact Northeast Regional Office at (570) 675-1143 to discuss potential impacts to State Game Lands that may have occurred as a result of this project and to determine if any mitigation efforts are required.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for an additional year.

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.

Sincerely,



Olivia A. Mowery
Environmental Planner
Division of Environmental Planning & Habitat Protection
Bureau of Wildlife Habitat Management
Phone: 717-787-4250, Extension 3128
Fax: 717-787-6957
E-mail: OMowery@pa.gov

A PNHP Partner



OAM/oam

Enclosures: *USFWS Indiana Bat Mist-netting Guidelines*
PGC Small-footed Myotis Mist-Net/Telemetry Protocol

cc: Librandi Mumma
DuBrock
Brauning
Butchkoski
Turner
Schweitzer
Sussenbach
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April 2, 2012

Large Project PNDI Review

Mr. David Yezuita
URS Corporation
335 Commerce Drive
Fort Washington, Pennsylvania 19034

Re: PPL – Northeast/Pocono Reliability Project
North Pocono Substation 138/69 kV Connector Line
Covington Township, Lackawanna County, Pennsylvania
Sterling and Lehigh Townships, Wayne County, Pennsylvania

Dear Mr. Yezuita,

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.

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 birds and mammals 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
<i>Glaucomys sabrinus</i>	Northern flying squirrel	ENDANGERED
<i>Myotis leibii</i>	Eastern Small-footed Bat	THREATENED

Next Steps

The following surveys should be performed for above listed species so that a more accurate determination can be made:

- *Northern flying squirrel habitat assessment.* State endangered northern flying squirrels have been documented in the vicinity of the proposed project area and the potential for suitable habitat exists. In Pennsylvania, northern flying squirrels are tied closely to old growth forests or mature stands with a significant conifer component. We recommend a northern flying squirrel habitat assessment be completed the project area to document the

presence or absence of such habitat. All suitable habitat should be completely delineated (with GIS shapefiles provided) and photo documented. Potential northern flying squirrel habitat, once identified, should be avoided to the greatest extent practicable.

- *Bat mist netting with telemetry for state threatened and endangered species.* The project area shall be surveyed between May 15 and August 15 following the *U.S. Fish and Wildlife Services Indiana Bat Mist-Netting Guidelines* (attached). Mist net surveys should be conducted by a qualified bat surveyor listed on the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list. Suitable eastern small-footed bats that may be captured during the mist net survey should be radio-tracked following the *PGC's Small-footed Myotis Mist-Net/Telemetry Protocol* (attached).
- Portions of the above referenced project are located on and adjacent to **State Game Lands #312**. Please contact Northeast Regional Office at (570) 675-1143 to discuss potential impacts to State Game Lands that may have occurred as a result of this project and to determine if any mitigation efforts are required.

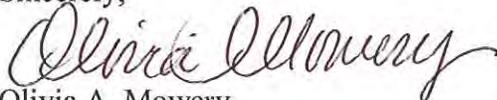
A copy of the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list can be obtained from the U.S. Fish and Wildlife Services State College, PA field office. A PGC Special Use Permit will need to be obtained by the consultant prior to conducting any of the above listed surveys that involve the handling of bats. Finally, a draft mist-net survey plan shall be submitted to the PGC for review and concurrence prior to initiating the above listed surveys.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for an additional year.

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.

Sincerely,



Olivia A. Mowery

Environmental Planner

Division of Environmental Planning & Habitat Protection

Bureau of Wildlife Habitat Management

Phone: 717-787-4250, Extension 3128

Fax: 717-787-6957

E-mail: OMowery@pa.gov

A PNHP Partner



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Enclosures: *USFWS Indiana Bat Mist-netting Guidelines*
PGC Small-footed Myotis Mist-Net/Telemetry Protocol

cc: Librandi Mumma
DuBrock
Brauning
Butchkoski
Turner
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717-783-5957

December 30, 2011

Large Project PNDI Review

Mr. David Yezuita
URS Corporation
335 Commerce Drive
Fort Washington, Pennsylvania 19034

Re: PPL – Northeast/Pocono Reliability Project
North Pocono Substation to Paupack Substation 230 kV Transmission Line
Covington Township, Lackawanna County, Pennsylvania
Sterling, Lehigh, Madison, Salem and Paupack Townships, Wayne County, Pennsylvania

Dear Mr. Yezuita,

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.

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 birds and mammals 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
<i>Glaucomys sabrinus</i>	Northern flying squirrel	ENDANGERED
<i>Myotis leibii</i>	Eastern Small-footed Bat	THREATENED

Next Steps

The following surveys should be performed for above listed species so that a more accurate determination can be made:

- *Northern flying squirrel habitat assessment.* State endangered northern flying squirrels have been documented in the vicinity of the proposed project area and the potential for suitable habitat exists. In Pennsylvania, northern flying squirrels are tied closely to old growth forests or mature stands with a significant conifer component. We recommend a northern flying squirrel habitat assessment be completed for the portions of the project

area located north of State Route 191 to document the presence or absence of such habitat. All suitable habitat should be completely delineated (with GIS shapefiles provided) and photo documented. Potential northern flying squirrel habitat, once identified, should be avoided to the greatest extent practicable.

- *Bat mist netting with telemetry for state threatened and endangered species.* The project area shall be surveyed between May 15 and August 15 following the *U.S. Fish and Wildlife Services Indiana Bat Mist-Netting Guidelines* (attached). Mist net surveys should be conducted by a qualified bat surveyor listed on the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list. Suitable eastern small-footed bats that may be captured during the mist net survey should be radio-tracked following the *PGC's Small-footed Myotis Mist-Net/Telemetry Protocol* (attached).

A copy of the U.S. Fish and Wildlife Service Qualified Indiana Bat Surveyor list can be obtained from the U.S. Fish and Wildlife Services State College, PA field office. A PGC Special Use Permit will need to be obtained by the consultant prior to conducting any of the above listed surveys that involve the handling of bats. Finally, a draft mist-net survey plan shall be submitted to the PGC for review and concurrence prior to initiating the above listed surveys.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for an additional year.

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.

Sincerely,



Olivia A. Mowery
Environmental Planner
Division of Environmental Planning & Habitat Protection
Bureau of Wildlife Habitat Management
Phone: 717-787-4250, Extension 3128
Fax: 717-787-6957
E-mail: OMowery@pa.gov

A PNHP Partner



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Enclosures: *USFWS Indiana Bat Mist-netting Guidelines*
PGC Small-footed Myotis Mist-Net/Telemetry Protocol

cc: Librandi Mumma
DuBrock
Brauning
Butchkoski
Turner
File



BUREAU OF FORESTRY

May 2, 2012

PNDI Number: 21776

David Yezuita
URS Corporation
Philadelphia Office
335 Commerce Drive, Suite 300
Fort Washington, PA 19035-2623
FAX: 215-367-1000 (hard copy will not follow)

Re: PPL Electric Utilities
Northeast / Pocono Reliability Project (Updated alignment, previous PNDI# 21562)
Jenkins Substation to West Pocono Substation 230 kV Transmission Line
Plains, Bear Creek, & Bucks Townships; Luzerne County

Dear Mr. Yezuita,

Thank you for your submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Large Project Number **21776 (Update of 21562)** 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.

Potential Impact Anticipated

PNDI records indicate species or resources of concern are located within the vicinity of the project area. Based on a detailed PNDI review, DCNR determined potential impacts to the following threatened or endangered species or species of special concern.

Survey Request

Our records indicate that species of special concern are known within the vicinity and it appears there may be potential habitat onsite; our records show some species as being located onsite. Therefore, we request a survey for the following species, in areas of disturbance in appropriate habitat. (Habitat and flowering time information from *The Plants of Pennsylvania, 2nd Edition*, by Rhoads and Block). Please note our new survey protocols are available at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>.

Plant Species of Special Concern: Botanical surveys should be conducted for the following species.

***Utricularia cornuta* (Horned Bladderwort):** Currently N, Proposed PT; habitat is described as shallow water of marshes, ponds and ditches; Flowers July - Aug.; OBL. Horned bladderwort is known nearby in a floating bog-mat surrounded by a beaver-impacted spruce and tall shrub swamp; this particular swamp appears to continue into the project area and this species may be present in the project area; please have your botanist contact our office for more specific location information.

***Carex oligosperma* (Few-seeded Sedge):** PT; habitat is sphagnum bogs; OBL. Few-seeded sedge is known nearby in a young mixed hardwood spruce palustrine forest at the edge of an open/sedgy portion of the swamp. This species was also found within a large vernal pool in a matrix of dry, acid oak-heath forest.

***Ledum groenlandicum* (Common Labrador-tea):** PR; habitat consists of bogs and peaty wetlands; flowers June; OBL. Common Labrador-tea is known nearby in a swamp with areas of shrubs and areas of mixed conifer/hardwood swamp in shallow sphagnum peat.

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PNDI Number: 21776

***Gaultheria hispidula* (Creeping Snowberry):** PR; habitat is described as wet woods and bogs; flowers June, fruits September; FACW. Creeping snowberry is known nearby in a red-spruce mixed hardwood palustrine forest in shallow sphagnum peat.

Communities of Special Concern: If the following communities are identified onsite during the botanical survey, please map them and submit along with the survey report.

Rhodora - mixed heath - scrub oak shrubland: GNR, S1. This is a very rare, highly restricted community type. It is known only from the southern Pocono Plateau. This barren-like vegetation does not appear to be a response to droughty or nutrient-poor soils. Attached is more information about this community.

Scrub oak shrubland: GNR, S3. This community type occurs either on sandy soils or on thin soils over bedrock. Conditions are dry; soils are acidic. It most commonly occurs on rocky ridgetops. It also may occur on sites where frequent or recent disturbance has removed the tree layer. This type also includes most of what is referred to as "Sand barrens." Please note this community type is known as occurring within the proposed project area. Please have your botanist contact us for specific location information.

Leatherleaf -cranberry peatland: GNR, S2S3. In glacial bogs, this community often occupies the central zone or one of the final zones of rooted vegetation surrounding an aquatic interior.

Terrestrial Invertebrate Species of Special Concern: If the following host plants and habitat are encountered, please make a note of it in the survey report.

***Diarsia rubifera* (Red Dart moth):** G5, SU. Habitat consists of Ridgetop barrens. Not much is known about this moth's life history. It was previously collected by blacklight in a barrens area with extensive blueberry, choke berry, scrub oak and gray birch. Our records show this moth was previously found onsite of the proposed project area.

***Lycaena epixanthe* (Bog Copper):** G4G5, S2. Habitat: Acid bogs with cranberries and other Ericaceae. Larval Host: Shrubby cranberries in the heath family (Ericaceae). Food Source: Water from raindrops and nectar from cranberry flowers. One flight from June-September. Bog copper butterfly was found nearby in a cranberry mat.

***Platyperigea meralis* (A Noctuid Moth):** G4, S1. Not much is known about this moth's life history. This species is associated with scrub oak barrens, the larval food plant is only documented as herbs. This noctuid moth was collected at a blacklight, along with the red dart moth, in a barrens area with extensive blueberry, choke berry, scrub oak and gray birch. Our records show this moth was previously found onsite of the proposed project area.

A survey for the above species should be conducted by a qualified botanist *at the appropriate time of year and then submitted to our office for review.* Your botanist should carefully review the new DCNR Botanical Survey Protocols available at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>. These protocols are recommended to ensure that the all necessary information is collected and that survey reports are prepared properly. It is the expectation of DCNR that these protocols will be followed when conducting surveys for species under our jurisdiction. Contact our office prior to the survey for detailed information about the species, or for a list of qualified surveyors.

Any target and non-target state-listed species found during the site visit should be reported to our office. Mitigation measures and monitoring may be requested if species or communities of special concern are found on or adjacent to site. If the land type(s) does not exist onsite a survey may not be necessary: please submit a habitat assessment report which describes the current land cover, habitat types and species found onsite.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map).

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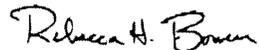
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PNDI Number: 21776

This finding applies to impacts to DCNR only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure the U.S. Fish and Wildlife Service, PA Game Commission, and the Pennsylvania 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.

Sincerely,



Rebecca H. Bowen, Environmental Review Manager FOR Chris Firestone, Wild Plant Program Mgr.
Ph: 717-772-0258 - c-rbowen@pa.gov

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pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

19998673

BUREAU OF FORESTRY

November 4, 2011

PNDI Number: 21563

David Yezuita
URS Corporation
Philadelphia Office
335 Commerce Drive, Suite 300
Fort Washington, PA 19035-2623
FAX: 215-367-1000 (hard copy will not follow)

Re: PPL Electric Utilities
Northeast / Pocono Reliability Project
West Pocono Substation to North Pocono Substation 230 kV Transmission Line
Luzerne, Lackawanna and Wayne Counties

Dear Mr. Yezuita,

Thank you for your submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Large Project Number **21563** 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.

Potential Impact Anticipated

PNDI records indicate species or resources of concern are located within the vicinity of the project area. Based on a detailed PNDI review, DCNR determined potential impacts to the following threatened or endangered species or species of special concern.

Survey Request

Our records indicate that species of special concern are known within the vicinity and it appears there may be potential habitat onsite. Therefore, we request a survey for the following species, in areas of disturbance in appropriate habitat. (Habitat and flowering time information from *The Plants of Pennsylvania, 2nd Edition*, by Rhoads and Block). Please note our new survey protocols are available at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>.

Plant Species of Special Concern: Botanical surveys should be conducted for the following species.

- Alopecurus aequalis* (short-awn Foxtail):** Currently N, Proposed PT; habitat consists of swamps, ditches & moist meadows; flowers late May – June; OBL. Short-awn foxtail is known nearby in a two-pond complex surrounded by a mixed hardwood forest.
- Andromeda polifolia* (Bog-rosemary):** PR; habitat is described as bogs and peaty wetlands; flowers in May; OBL. Bog-rosemary is known in the vicinity in a glacial bog with leatherleaf and sphagnum mounds surrounding open water.
- Arceuthobium pusillum* (Dwarf Mistletoe):** PT; habitat is sphagnum bogs where host *Picea mariana* is found; flowers June-July. Dwarf mistletoe is found in a few locations nearby in swamps with black spruce.
- Carex lasiocarpa* (Slender Sedge):** PR; habitat includes sphagnum bogs; OBL. Slender sedge is found nearby in a pond with extensive, mature bog mat with many woody species.

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PNDI Number: 21563

- Carex limosa* (Mud Sedge):** Currently TU, Proposed PT; habitat is sphagnum bogs mats and hummocks; OBL. Mud sedge utilizes open inundated conditions associated with slender sedge, and another boreal conifer-dominated peatland.
- Carex oligosperma* (Few-seeded Sedge):** PT; habitat includes sphagnum bogs; OBL. This species was also found within a large vernal pool in a matrix of dry, acid oak-heath forest.
- Carex paupercula* (Bog Sedge):** Currently PT, Proposed PR; habitat is sphagnum bogs and boggy woods; OBL. Many occurrences of bog sedge are known in this region, utilizing glacial bogs.
- Gaultheria hispidula* (Creeping Snowberry):** PR; habitat is wet woods and bogs; flowers June, fruits September; FACW. Creeping snowberry is known nearby in a boreal conifer-dominated peatland on a flat, saturated area in partial-filtered light.
- Ledum groenlandicum* (Common Labrador-tea):** PR; habitat is described as bogs and peaty wetlands; flowers June; OBL. Common Labrador-tea is found in the vicinity in several loctaoins, found in ponds with bog mats, boreal conifer swamps, and acidic shrub swamps.
- Solidago uliginosa* (Bog Goldenrod):** Currently N, Proposed PT; habitat is bogs, swamps, sedge meadows, and fens; flowers August – October; OBL. Bog goldenrod is found in the vicinity in a sphagnous hummocky wetland in full sun.
- Utricularia cornuta* (Horned Bladderwort):** Currently N, Proposed PT; shallow water of marshes, ponds and ditches; flowers July – August; OBL. Horned bladderwort is found nearby in a bog on a nearby pond.

Communities of Special Concern: If the following communities are identified onsite during the botanical survey, please map them and submit along with the survey report.

Black spruce - tamarack palustrine woodland: GNR, S2. This is a peatland community type that occurs in both glaciated and non-glaciated areas. Tree cover totals between 10% and 60%. *Picea mariana* (black spruce) and *Larix laricina* (tamarack) are usually both present in some amount, at least one dominating or co-dominating the tree stratum.

Hemlock - mixed hardwood palustrine forest: GNR, S3S4. This describes a group of wetland forests that are dominated by a mixture of conifers and hardwood species. The substrate is usually mineral soil or muck over mineral soil. There is generally some groundwater enrichment in these systems. *Tsuga canadensis* (eastern hemlock) contributes between 25% and 75% of the canopy.

Terrestrial Invertebrate Species of Special Concern: If the following host plants and habitat are encountered, please make a note of it in the survey report.

***Carterocephalus palaemon mandan* (Arctic Skipper):** G5T5, S2. Habitat: Glades and openings in heavily forested woods, moist meadows, and streamsides. Larval Host: Grasses including purple reedgrass (*Calamagrostis purpurascens*) in California, and bromes (*Bromus*) in Europe; probably others. Food Source: Nectar from flowers including Iris. One brood from May-July. Arctic skipper is known nearby in a mesic woods surrounding graminoid marsh and shrub swamp.

***Lycaena epixanthe* (Bog Copper):** G4G5, S2. Habitat: Acid bogs with cranberries and other Ericaceae. Larval Host: Shrubby cranberries in the heath family (Ericaceae.) Food Source: Water from raindrops and nectar from cranberry flowers. One flight from June-September. Bog copper is known nearby in a large cranberry mat.

A survey for the above species should be conducted by a qualified botanist *at the appropriate time of year and then submitted to our office for review.* Your botanist should carefully review the new DCNR Botanical Survey Protocols available at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>. These protocols are recommended to ensure that the all necessary information is collected and that survey reports are prepared properly. It is the expectation of DCNR that these protocols will be followed when conducting surveys for species under our jurisdiction. Contact our office prior to the survey for detailed information about the species, or for a list of qualified surveyors.

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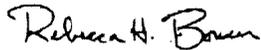
PNDI Number: 21563

Any target and non-target state-listed species found during the site visit should be reported to our office. Mitigation measures and monitoring may be requested if species or communities of special concern are found on or adjacent to site. If the land type(s) does not exist onsite a survey may not be necessary; please submit a habitat assessment report which describes the current land cover, habitat types and species found onsite.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map).

This finding applies to impacts to DCNR only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure the U.S. Fish and Wildlife Service, PA Game Commission, and the Pennsylvania 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.

Sincerely,



Rebecca H. Bowen, Environmental Review Manager FOR Chris Firestone, Wild Plant Program Mgr.
Ph: 717-772-0258 ~ c-rbowen@pa.gov

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**DETAILED INFORMATION ON COMMUNITIES
PNDI PROJECT #21563**

From: *Terrestrial and Palustrine Plant Communities of PA. Fike, 1999.*
(<http://www.dcnr.state.pa.us/wrcf/fikebook.aspx>.)

Black spruce - tamarack palustrine woodland

This is a peatland community type that occurs in both glaciated and non-glaciated areas. Tree cover totals between 10% and 60%. *Picea mariana* (black spruce) and *Larix laricina* (tamarack) are usually both present in some amount, at least one dominating or co-dominating the tree stratum. Other trees commonly include *Abies balsamea* (balsam fir), *Pinus strobus* (eastern white pine), *Tsuga canadensis* (eastern hemlock), and *Acer rubrum* (red maple). Shrubs include *Chamaedaphne calyculata* (leatherleaf), *Kalmia angustifolia* (sheep laurel), *Alnus incana* (speckled alder), *Aronia melanocarpa* (black chokeberry), *Vaccinium myrtilloides* (velvet-leaf berry), *V. corymbosum* (highbush blueberry), *Ledum groenlandicum* (Labrador tea), *Rhododendron viscosum* (swamp azalea), *Kalmia polifolia* (bog laurel), *V. macrocarpon* (cranberry), and *Nemopanthus mucronatus* (mountain holly). Herbs include *Rhynchospora alba* (white beak-rush), *Thelypteris palustris* (marsh fern), *Drosera intermedia* (spatulate-leaved sundew), *D. rotundifolia* (round-leaved sundew), *Sarracenta purpurea* (pitcher-plant), *Eriophorum virginicum* (tawny cotton-grass), *E. uaginatum* spp. *spissum* (cotton-grass), *Carex canescens* (a sedge), *C. trisperma* (a sedge), and *C. folliculata* (a sedge). The bryophyte layer is well developed and dominated by sphagnum. This community type may occur as part of the "Acidic glacial peatland complex."

Related types: This type is closely related to the "Black spruce - tamarack peatland forest" type, which may accompany it. The distinction between the two is the percent canopy cover; the forested type typically has greater than 60% cover by trees, the woodland type less.

Range: Glaciated NE, Glaciated NW, Pocono Plateau, Unglaciated Allegheny Plateau.

Selected references: Crum 1992, PNDI field surveys.

[**Crosswalk:** Smith's "Non-Glacial Bog" (in part), "Oligotrophic Kettlehole Bog" (in part), TNC's *Picea mariana* Saturated Woodland Alliance, *Picea mariana* / *Ledum groenlandicum* / *Sphagnum* spp. Community, SAF's Black spruce - tamarack (13).]

Hemlock - mixed hardwood palustrine forest

This describes a group of wetland forests that are dominated by a mixture of conifers and hardwood species. The substrate is usually mineral soil or muck over mineral soil. There is generally some groundwater enrichment in these systems. *Tsuga canadensis* (eastern hemlock) contributes between 25% and 75% of the canopy. Other conifer species that may occur with hemlock include *Pinus strobus* (eastern white pine), *Picea rubens* (red spruce), and *Larix laricina* (tamarack). The most common hardwood species are *Betula alleghaniensis* (yellow birch), *Acer rubrum* (red maple), *Fraxinus nigra* (black ash), *Nyssa sylvatica* (black-gum), and *Betula populifolia* (gray birch). *Rhododendron maximum* (rosebay) often forms a dense understory; other shrubs include *Vaccinium corymbosum* (highbush blueberry), *Ilex verticillata* (winterberry), *Rhododendron viscosum* (swamp azalea) and *Viburnum cassinoides* (withe-rod). Herbaceous species include *Osmunda cinnamomea* (cinnamon fern), *Carex folliculata* (a sedge), *Viola* spp. (violets), *C. trisperma* (a sedge), *Symplocarpus foetidus* (skunk-cabbage), *Veratrum viride* (false hellebore), *Osmoclea sensibilis* (sensitive fern), and *Aster puniceus* (purple-stemmed aster). The bryophyte layer is usually well developed and dominated by sphagnum.

Related types: Where the conifer component is less than 25% of the canopy, see the "Broadleaf palustrine forests" section, and where the conifer component is greater than 75%, see the "Hemlock palustrine forest" type under "Coniferous palustrine forests."

Range: Glaciated NE, Glaciated NW, Pocono Plateau, Ridge and Valley, Unglaciated Allegheny Plateau,.

Selected references: Smith 1991, Sneddon, Anderson, and Metzler 1996, Reschke 1990.

[**Crosswalk:** Smith's "Broadleaf - Conifer Swamp" subtype "a", TNC's *Tsuga canadensis* - *Acer rubrum* Saturated Forest Alliance, SAF's Hemlock - yellow birch (24) and parts of Eastern hemlock (23).]



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DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

19998853

BUREAU OF FORESTRY

November 4, 2011

PNDI Number: 21564

David Yezuita
URS Corporation
Philadelphia Office
335 Commerce Drive, Suite 300
Fort Washington, PA 19035-2623
FAX: 215-367-1000 (hard copy will not follow)

Re: PPL Electric Utilities
Northeast / Pocono Reliability Project
North Pocono Substation to Paupack Substation 230 kV Transmission Line
Lackawanna and Wayne Counties

Dear Mr. Yezuita,

Thank you for your submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Large Project Number 21564 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.

Potential Impact Anticipated

PNDI records indicate species or resources of concern are located within the vicinity of the project area. Based on a detailed PNDI review, DCNR determined potential impacts to the following threatened or endangered species or species of special concern.

Survey Request

Our records indicate that species of special concern are known within the vicinity and it appears there may be potential habitat onsite. Therefore, we request a survey for the following species, in areas of disturbance in appropriate habitat. (Habitat and flowering time information from *The Plants of Pennsylvania, 2nd Edition*, by Rhoads and Block). Please note our new survey protocols are available at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>.

Plant Species of Special Concern: Botanical surveys should be conducted for the following species.

- Andromeda polifolia* (Bog-rosemary):** PR; habitat is described as bogs and peaty wetlands; flowers in May; OBL. Bog-rosemary is known in the vicinity in a large blocked drainage with cushion-like vegetation mat and tree-shrub edge around mat.
- Arceuthobium pusillum* (Dwarf Mistletoe):** PT; habitat is sphagnum bogs where host *Picea mariana* is found; flowers June-July. Dwarf mistletoe is found in nearby in northern peatlands with black spruce.
- Carex limosa* (Mud Sedge):** Currently TU, Proposed PT; habitat is sphagnum bogs mats and hummocks; OBL. Mud sedge is found in the vicinity in a large boreal conifer-dominated peatland.
- Carex paupercula* (Bog Sedge):** Currently PT, Proposed PR; habitat is sphagnum bogs and boggy woods; OBL. Many occurrences of bog sedge are known in this region, utilizing northern peatlands and a bog-mat.
- Gaultheria hispidula* (Creeping Snowberry):** PR; habitat is wet woods and bogs; flowers June, fruits September; FACW. Creeping snowberry is known nearby in a boreal conifer-dominated.

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PNDI Number: 21564

***Ledum groenlandicum* (Common Labrador-tea):** PR; habitat is described as bogs and peaty wetlands; flowers June; OBL. Common Labrador-tea is found in the vicinity in a couple of locations, found in peatlands and areas with bog mats.

***Polystichum braunii* (Braun's Holly fern):** PE; habitat is cool, rocky, shaded ravines. Braun's holly fern is found nearby in a valley bottom with 35% slopes covered with rocks and pockets of rich humus-rich soil.

***Schoenoplectus subterminalis* (Water bulrush):** Currently N, Proposed PR; quiet water of lakes, ponds and slow-moving, boggy streams; fruits July-September; OBL. Water bulrush is known in the vicinity in a natural glacial lake with a boggy area at the inlet.

Communities of Special Concern: If the following communities are identified onsite during the botanical survey, please map them and submit along with the survey report.

Black spruce - tamarack peatland forest: GNR, S3. *Picea mariana* (black spruce) and/or *Larix laricina* (tamarack) dominate this community type. Sphagnum occurs throughout. This community type may occur as part of the "Acidic glacial peatland complex."

Leatherleaf - bog rosemary peatland: GNR, S2S3. *Chamaedaphne calyculata* (leatherleaf) is the dominant shrub. Associate species include *Kalmia angustifolia* (sheep laurel), *Andromeda polifolia* (bog-rosemary), *Aronia arbutifolia* (red chokeberry). There is usually a continuous sphagnum layer. This type occurs on organic soil, sometimes on a floating mat. This community type may occur as part of the "Acidic glacial peatland complex."

Red spruce palustrine forest: GNR, S3. This community type occurs on shallow organic soils or mineral soils with a substantial accumulation of organic matter. *Picea rubens* (red spruce) is always present, usually dominant or codominant.

Terrestrial Invertebrate Species of Special Concern: If the following host plants and habitat are encountered, please make a note of it in the survey report.

***Carterocephalus palaemon mandan* (Arctic Skipper):** G5T5, S2. Habitat: Glades and openings in heavily forested woods, moist meadows, and streamsides. Larval Host: Grasses including purple reedgrass (*Calamagrostis purpurascens*) in California, and bromes (*Bromus*) in Europe; probably others. Food Source: Nectar from flowers including Iris. One brood from May-July. Arctic skipper is known nearby in a mesic woods surrounding graminoid marsh and shrub swamp.

A survey for the above species should be conducted by a qualified botanist *at the appropriate time of year and then submitted to our office for review.* Your botanist should carefully review the new DCNR Botanical Survey Protocols available at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>. These protocols are recommended to ensure that the all necessary information is collected and that survey reports are prepared properly. It is the expectation of DCNR that these protocols will be followed when conducting surveys for species under our jurisdiction. Contact our office prior to the survey for detailed information about the species, or for a list of qualified surveyors.

Any target and non-target state-listed species found during the site visit should be reported to our office. Mitigation measures and monitoring may be requested if species or communities of special concern are found on or adjacent to site. If the land type(s) does not exist onsite a survey may not be necessary; please submit a habitat assessment report which describes the current land cover, habitat types and species found onsite.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year 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 this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map).

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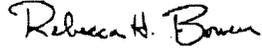
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PNDI Number: 21564

This finding applies to impacts to DCNR only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure the U.S. Fish and Wildlife Service, PA Game Commission, and the Pennsylvania 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.

Sincerely,



Rebecca H. Bowen, Environmental Review Manager FOR Chris Firestone, Wild Plant Program Mgr.
Ph: 717-772-0258 - c-rcbowen@pa.gov

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**DETAILED INFORMATION ON COMMUNITIES
PNDI PROJECT #21564**

From: *Terrestrial and Palustrine Plant Communities of PA, Fike, 1999.*
(<http://www.dcnr.state.pa.us/wrcf/fikebook.aspx>)

Black spruce - tamarack peatland forest

Picea mariana (black spruce) and/or *Larix laricina* (tamarack) dominate this community type. Other trees that may occur include *Betula populifolia* (gray birch), *Acer rubrum* (red maple), *Tsuga canadensis* (eastern hemlock), *Pinus strobus* (eastern white pine), and *Populus tremuloides* (quaking aspen). Shrub species include *Rhododendron viscosum* (swamp azalea), *Nemopanthus mucronatus* (mountain-holly), *Ilex verticillata* (winterberry), and *Vaccinium corymbosum* (highbush blueberry). Herbaceous species include *Carex trisperma* (a sedge), *C. dispermas* (a sedge), *Trientalis borealis* (starflower), *Osmunda cinnamomea* (cinnamon fern), *O. regalis* (royal fern), *Viola* spp. (violets), *Gaultheria hispidula* (creeping snowberry) and *Coptis trifolia* (goldthread). Sphagnum occurs throughout. This community type may occur as part of the "Acidic glacial peatland complex."

Related types: Where canopy closure is less than 60%, this type becomes the "Black spruce - tamarack palustrine woodland." The open canopy of the woodland type allows for a much more extensive shrub layer—usually dominated by *Chamaedaphne calyculata* (leatherleaf), and a herbaceous layer more typical of open bogs.

Range: Glaciated NE, Glaciated NW, Pocono Plateau.

Selected references: PNDI field surveys, Sneddon, Anderson, and Metzler 1996.

[**Crosswalk:** Smith's "Boreal Conifer Swamp," TNC's *Picea mariana* - *Larix laricina* Saturated Forest Alliance, SAF's Black spruce-sphagnum (12d).]

Leatherleaf - bog rosemary peatland

Chamaedaphne calyculata (leatherleaf) is the dominant shrub. Associate species include *Kalmia angustifolia* (sheep laurel), *Andromeda polifolia* (bog-rosemary), *Aronia arbutifolia* (red chokeberry), *Gaylussacia baccata* (black huckleberry), and *Ledum groenlandicum* (Labrador tea). This type often occurs between a woodland or tall-shrub type and the "Leatherleaf-cranberry peatland" type below. Herbaceous species include *Sarracenia purpurea* (pitcher-plant), *D. rotundifolia* (round-leaved sundew), *Rhynchospora alba* (white beak-rush), *Vaccinium macrocarpon* (cranberry), and *Eriophorum virginicum* (tawny cotton-grass). There is usually a continuous sphagnum layer. This type occurs on organic soil, sometimes on a floating mat. This community type may occur as part of the "Acidic glacial peatland complex."

Related types: In terms of pH and nitrogen availability, this type is probably intermediate between the other two leatherleaf types. This type is characterized by low mixed ericaceous shrubs and herbs over sphagnum, usually on organic soil.

Range: Glaciated NW, Glaciated NE, Pocono Plateau, Unglaciated Allegheny Plateau.

Selected references: Crum 1988, Johnson 1985, PNDI field surveys, Reschke 1990.

[**Crosswalk:** Smith's "Oligotrophic Kettlehole Bog," and "Weakly Minerotrophic Lakeside Bog," TNC's *Chamaedaphne Calyculata* Dwarf - Shrubland Alliance.]

Red spruce palustrine forest

This community type occurs on shallow organic soils or mineral soils with a substantial accumulation of organic matter. *Picea rubens* (red spruce) is always present, usually dominant or codominant. Other tree species include *Pinus strobus* (eastern white pine), *Tsuga canadensis* (eastern hemlock), *Acer rubrum* (red maple), *Betula populifolia* (gray birch), *B. alleghaniensis* (yellow birch), *Nyssa sylvatica* (black-gum), and occasionally *Abies balsamea* (balsam fir). *Rhododendron maximum* (rosebay) is common and often forms a dense understory. Other shrub species that may be present include *Viburnum cassinoides* (withe-rod), *Ilex verticillata* (winterberry), *Vaccinium corymbosum* (highbush blueberry), and *Nemopanthus mucronatus*

21564 Communities - 2 -

(mountain-holly). There is usually a pronounced mound and pool microtopography. Characteristic herbs occurring on mounds include *Osmunda cinnamomea* (cinnamon fern), *Viola* spp. (violets), *Mitchella repens* (partridge-berry), *Maianthemum canadense* (Canada mayflower), *Coptis trifolia* (goldthread), *Cornus canadensis* (bunchberry), *Carex trisperma*, and other sedge species. The bryophyte layer is usually well developed and dominated by sphagnum.

Related types: Where canopy closure is less than 60%, this type becomes the "Red spruce palustrine woodland," where dominance is shared with hardwoods (where total conifer cover is less than 75% of the canopy) this becomes the "Red spruce - mixed hardwood palustrine forest."

Range: Glaciated NE, Pocono Plateau.

Selected references: Sneddon, Anderson, and Metzler 1996.

[Crosswalk: Smith's "Boreal Conifer Swamp," TNC's *Picea rubens* Saturated Forest Alliance, SAF's Red spruce (32).]



BUREAU OF FORESTRY

November 4, 2011

PNDI Number: 21563, 21564

David Yezuita
URS Corporation
335 Commerce Drive, Suite 300
Fort Washington, PA 19134
FAX: 215-367-1000 (hard copy will not follow)

**Re: PPL Northeast/Pocono Reliability Project—Additional Information
State Forest Lands Impact**

Dear Mr. Yezuita,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Large Project Number **21563 and 21564** 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.

Please note, this information was neglected from the original survey request letters, sent to you today. The proposed project will affect State Forest lands within the Lackawanna State Forest district. Further coordination with the Bureau of Forestry is required. I apologize for not including this important information in the original survey request letters, and please note that this is simply to alert you that you will need to do additional coordination and planning with other members of Bureau of Forestry.

A portion of these projects take place on the Lackawanna State Forest district. 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. As such, the DCNR Bureau of Forestry may request additional surveys in association with this project. **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.** Please contact Dave Mong, Operations Section, at (717) 783-7947 for additional information.

Sincerely,

A handwritten signature in cursive script that reads 'Rebecca H. Bowen'.

Rebecca H. Bowen, Environmental Review Manager FOR Chris Firestone, Wild Plant Program Mgr.
Ph: 717-772-0258 - c-rbowen@pa.gov

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TOTAL P.01