



Michael P. Gallagher
Exelon Nuclear
Vice President
License Renewal and Decommissioning

200 Exelon Way
Kennett Square, PA 19348

610 765 5958 Office
610 765 5658 Fax
www.exeloncorp.com

michaelp.gallagher@exeloncorp.com

September 26, 2017

NOAA Fisheries
Greater Atlantic Regional Fisheries Office (GARFO)
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930

Re: Peach Bottom Atomic Power Station, Units 2 and 3
Second Renewal of U.S. Nuclear Regulatory Commission Operating Licenses
Request for Information on Federally Protected Species

Dear Sir or Madam:

In the third quarter of 2018, Exelon Generation Company, LLC (Exelon Generation; a subsidiary of Exelon Corporation) plans to apply to the U.S. Nuclear Regulatory Commission (NRC) for the second renewal of the operating licenses for Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3. Renewal by the NRC of the operating licenses would give Exelon Generation and the State of Pennsylvania the option of relying on PBAPS to meet future baseload power generating needs. Unit 2 began operating in 1973, and the existing license for Unit 2 will expire in August 2033. Unit 3 began operating in 1974, and the existing license for Unit 3 will expire in July 2034. The renewal term for each unit would be an additional twenty years beyond the existing license expiration date.

The NRC requires that license renewal applications include environmental reports assessing potential environmental impacts from license renewal activities. One such impact would be effects of license renewal activities on species that are listed or proposed for listing as threatened or endangered in accordance with the Endangered Species Act (ESA) (16 USC 1531, et seq.) and on important plant and animal habitats, including critical habitats as defined by the ESA as well as essential fish habitat as identified under the Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1801, et seq.) (10 CFR 51.53(c)(3)(ii)(E)). Accordingly, we are contacting you to obtain input for use in addressing these effects in the PBAPS second license renewal environmental report. Later, NRC may also request an informal consultation with your office under Section 7 of the ESA (16 USC 1536(a)) or Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act.

Activities during the License Renewal Terms

PBAPS second license renewal will involve no new construction, refurbishment, ground disturbing activities, changes to operations, or changes to existing land-use conditions. Operation and maintenance activities during the terms of the renewed PBAPS licenses are only expected to occur in previously disturbed areas or existing rights-of-way (ROWs). Hence, no new adverse impacts to threatened or endangered species, critical habitats, or essential fish habitat are anticipated from the second license renewal.

Project Features

PBAPS existing features that are relevant to the effects on special status species during the renewed license terms include the following:

1. The PBAPS plant site, which hosts the two generating units, is located on 620 acres of Exelon Generation-owned property located near Delta, Pennsylvania, primarily in Peach Bottom Township, York County, Pennsylvania on the west side of Conowingo Pond, which was created by the construction of the Conowingo dam on the Susquehanna River in 1928. The area within 6 miles of the site includes parts of York and Lancaster Counties in Pennsylvania and sections of Harford and Cecil Counties in Maryland.
2. PBAPS is approved by the Susquehanna River Basin Commission (SRBC) to withdraw water from the Conowingo Pond to cool the condensers in a once-through heat dissipation system. Second license renewal requires no change to this authorization. The principal components of the circulating water system are the outer intake structure, intake basins, inner intake structure, condensers, discharge basin, helper cooling towers, discharge canal, and discharge structure.
 - a. Cooling water is withdrawn at a 148-meter-long (487-foot-long) outer intake structure on the west bank of Conowingo Pond.
 - b. After passing through the outer intake structure and travelling screens, circulating water enters a system of intake basins, followed by screens, and pumps, which comprise the inner intake structure. From the inner intake structure, the circulating water is pumped through the two main condensers where steam exiting the plant's turbine generators is cooled.
 - c. Heated cooling water from both units is discharged from the condensers into a cooling water discharge pond that directs the cooling water to the helper cooling towers and/or into the 1,430 m-long (4,700 ft-long) discharge canal, which carries it back to Conowingo Pond.
3. Discharges to Conowingo Pond of heated cooling water and other wastewaters are authorized by NPDES Permit No. PA0009733. Among the discharge limitations specified in the NPDES permit are (1) a requirement to implement the PBAPS procedure for reducing the temperature of water in the discharge canal when such water reaches 110 degrees F and (2) a requirement to operate the cooling towers during specific times and conditions. Second license renewal requires no change to the NPDES Permit.
4. Existing PBAPS transmission system components that would be removed from service if the NRC did not approve second license renewal are relevant to the effects on special status species of second license renewal. Such components include the following:

- a. Two 500-kV generator tie lines, which traverse only onsite property used for industrial purposes and serve to connect the main power transformer of each unit to its onsite substation (south substation for Unit 2 and north substation for Unit 3).
- b. One 34.5-kV submarine cable, which supplies power to the PBAPS units for safe shutdown if all other offsite power supplies as well as power from onsite diesel generators is unavailable. This 34.5-kV submarine cable is powered from the 33 kV bus at Susquehanna Substation (adjacent to the Conowingo Dam) and is routed either underwater or underground for most of its length before connecting to the PBAPS Station Blackout substation located near Unit 1.
- c. Three sources of startup auxiliary power that connect to 13-kV startup switchgear at the station:
 - i. A 220-kV line that traverses only onsite property used for industrial purposes and connects to the plant from equipment located near the north substation.
 - ii. An onsite, underground, dedicated 13-kV line that connects to the plant from equipment located near the north substation.
 - iii. An onsite, mostly underground, dedicated 13-kV line that connects to the plant from equipment collocated with the north substation.

The enclosed Figure 1 shows the locations of the existing PBAPS project features relevant to the effects of second license renewal on federally protected species and habitats as well as the full extent of the project area for the second license renewal.

Identification of Special Status Species and Essential Fish Habitat

Using the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool, a web-based application sponsored by the Pennsylvania Natural Heritage Program (PNHP), Exelon Generation has reviewed the potential for the PBAPS second license renewal to adversely affect known occurrences of species or natural communities of concern. The enclosed receipt for PNDI search ID PNDI-617811 contains a request from the U.S. Fish and Wildlife Service (USFWS) for a Bog Turtle Habitat (Phase 1) Survey completed by a qualified bog turtle surveyor. In response, the completed survey forms and corresponding memorandum have been submitted to the USFWS. The PNDI receipt identifies no other federally listed species of special concern (e.g. threatened or endangered species) or critical habitat for such species in the project area. Similarly, NOAA's online mapping tool, Essential Fish Habitat Mapper v3.0 (accessed 7/31/17), showed no Essential Fish Habitats (EFH), no Habitat Areas of Particular Concern (HAPCs), or EFH Areas Protected from Fishing (EFHA).

Fishery Management Plans (FMPs) developed by Mid-Atlantic, New England, and South-Atlantic Fishery Management Councils were reviewed to identify special status species in the Conowingo Pond or Chesapeake Bay watershed. Four species occurring in Conowingo Pond are regulated under the Atlantic Herring FMP developed by the New England Fishery Management Council: alewife, blueback herring, American shad, and hickory shad (Table 1). While these species are not targeted in commercial fisheries, their incidental catch within the Atlantic herring fishery is managed under the Atlantic Herring FMP.

Fisheries managed by the Atlantic States Marine Fisheries Commission (ASMFC) were also reviewed. Species found in Conowingo Pond managed by the ASMFC include alewife, American eel, American shad, blueback herring, hickory shad, and striped bass (Table 1). Multiple managed species are found in the Chesapeake Bay. There are catfish and blue crab fisheries within the Chesapeake Bay watershed; however, these are state managed fisheries, rather than federally managed.

While most federally managed commercial species may not occur within Conowingo Pond, the operation of PBAPS could possibly affect those species indirectly due to impacts to their forage. Significant impacts to the forage of a species may result in a bottom-up cascade, reducing the population of the predator species

The primary prey of the federally managed species in the Chesapeake Bay Watershed is provided in Table 2. The diets of federally managed commercial fisheries species occurring within the Chesapeake Bay, Susquehanna River, and Conowingo Pond are primarily marine-based and therefore, are not likely to be affected by the continued operations of PBAPS. Managed species found in Conowingo Pond consume zooplankton or benthic invertebrates, which are abundant throughout the Chesapeake Bay Watershed. The primary prey of striped bass, Atlantic menhaden, is not available to fish migrating into Conowingo Pond. However, this species currently exists in the Pond and presumably forages on other abundant clupeids.

Because the second license renewal involves no new construction, refurbishment, ground disturbing activities, changes to operation, or changes to existing land-use conditions, Exelon Generation does not expect PBAPS second license renewal to adversely affect ecologically significant habitats or federally protected species located in or near the PBAPS site, circulating water supply system, or transmission facilities. Further, Exelon Generation expects no adverse effects on EFHs, HAPCs, EFHAs, federally managed fish populations, or their prey. Nevertheless, we are requesting your help to identify issues we may have overlooked that need to be addressed in the PBAPS environmental report. We are also interested in learning of any information your staff believes could help expedite the NRC's review of the PBAPS second license renewal application. Hence, in closing, we would appreciate receiving a response from you detailing such issues and information for the PBAPS site. We would also welcome your confirmation of our conclusion that PBAPS second license renewal would not adversely affect EFHs, HAPCs, EFHAs, or any species that is federally-listed or proposed for listing as threatened and endangered.

Because we plan to incorporate a copy of your response, as well as this letter, into the PBAPS second license renewal environmental report that will be submitted to the NRC as part of the PBAPS second license renewal application, your response will be most helpful if we receive it by November 10, 2017.

September 26, 2017
NMFS -- 5

Please call Nancy Ranek (610-765-5369), our License Renewal Environmental Lead, if there are questions or you require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael P. Gallagher". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael P. Gallagher

Enclosures:

1. Figure 1 Site Boundary
2. Receipt for PNDI search ID PNDI-617811
3. NOAA NMFS Essential Fish Habitat Mapper Results
4. Table 1 Federally Managed Species Occurring In the Chesapeake Bay Watershed
5. Table 2 Primary Forage/Prey of Federally Managed Commercial Fish Species in the Chesapeake Bay Watershed
6. List of References

September 26, 2017
NMFS – Enclosure 1

ENCLOSURE 1

Figure 1 Site Boundary



Legend

- ★ PBAPS Center Point
- Overhead Transmission Line
- - - Underground Transmission Line
- Site Boundary

Note:
 1) Transmission lines are approximate and are only shown within the project area.
 2) Transmission line codes correspond to project features 4, in the attached letter.

Reference:
 Transmission Line source: Stone & Webster and Ebasco 2015 UFSAR
 NAD 1983 StatePlane Pennsylvania South Projection: Transverse Mercator
 Line at Unit: Foot US



0 500 1,000 2,000
 Feet

Figure 1
Site Boundary

Peach Bottom
 Peach Bottom, PA

Job
Prepared by: TFB
Checked by:
Date: 9/18/2017

September 26, 2017
NMFS – Enclosure 2

ENCLOSURE 2

Receipt for PNDI Search ID PNDI-617811

1. PROJECT INFORMATION

Project Name: **PBAPS_DraftER2016**

Date of Review: **9/21/2017 02:26:19 PM**

Project Category: **Energy Storage, Production, and Transfer, Energy Production (generation), Other**

Project Area: **774.51 acres**

County(s): **Lancaster; York**

Township/Municipality(s): **DRUMORE; FULTON; PEACH BOTTOM**

ZIP Code: **17314**

Quadrangle Name(s): **DELTA; HOLTWOOD**

Watersheds HUC 8: **Lower Susquehanna**

Watersheds HUC 12: **Fishing Creek-Susquehanna River**

Decimal Degrees: **39.756246, -76.270233**

Degrees Minutes Seconds: **39° 45' 22.4849" N, 76° 16' 12.8400" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	Potential Impact	MORE INFORMATION REQUIRED, See Agency Response

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

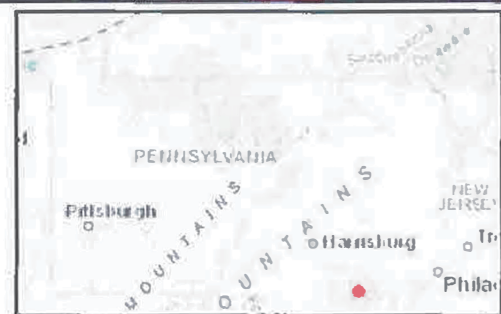
Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

PBAPS_DraftER2016

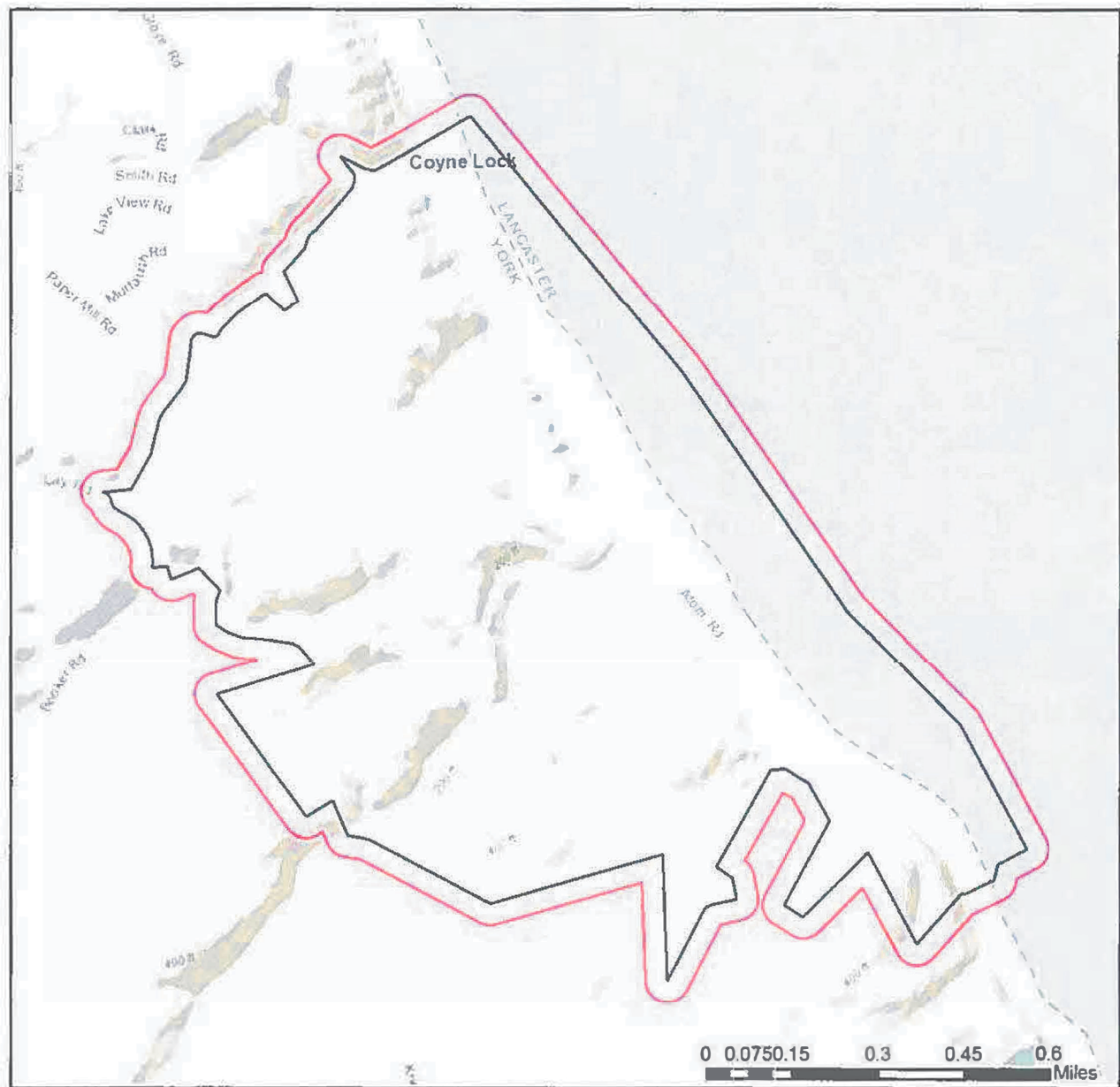


- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user

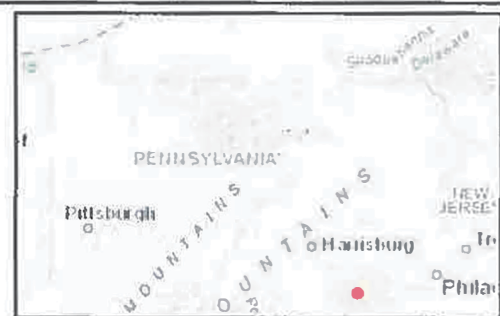


PBAPS_DraftER2016



- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits. Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESPONSE TO QUESTION(S) ASKED

Q1: Which of the following closest describes the proposed project?

Your answer is: A well or other groundwater extraction (e.g., groundwater pumping to facilitate mining, pump-and-treat operation) is proposed as part of this project, or in order to support some aspect of the project, but less than 1000 gallons per day will be extracted.

Q2: Are there any perennial or intermittent waterways (rivers, streams, creeks, tributaries) in or near the project area, or on the land parcel?

Your answer is: Yes

Q3: Describe how wastewater (effluent) will be handled (select one). For the purpose of this question, wastewater/effluent does not include stormwater runoff. If the project involves solely the renewal or modification of an existing discharge permit (e.g., NPDES permit), select from options 3, 4, 5, or 6 below.

Your answer is: Some or all wastewater/effluent from this project/activity will be discharged to a waterway (river or stream), and the discharge (including the existing discharge, plus any additional discharge) will exceed 5000 gallons/day.

Q4: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: The project area (or land parcel) has not been investigated by someone qualified to identify and delineate wetlands, or it is currently unknown if the project or project activities will affect wetlands.

Q5: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q6: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:

<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Asplenium pinnatifidum	Lobed Spleenwort	Special Concern Species*	Special Concern Species*	Year-round (evergreen)
Erigenia bulbosa	Harbinger-of-spring	Threatened	Special Concern Species*	Flowers March - April
Ilex opaca	American Holly	Threatened	Threatened	Flowers May - early June, fruits October - winter; evergreen leaves
Sensitive Species**		Special Concern Species*	Threatened	

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Percina bimaculata	Chesapeake Logperch	Threatened

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2006). Evaluate all wetlands within 300 feet of the project area, which includes all areas that will be impacted by earth disturbance or project features (e.g., roads, structures, utility lines, lawns, detention basins, staging areas, etc.). IF THE PHASE 1 SURVEY IS DONE BY A QUALIFIED BOG TURTLE SURVEYOR (see <https://www.fws.gov/northeast/pafo/endangered/surveys.html>): 1) Send positive results to USFWS for concurrence, along with a project description documenting how impacts will be avoided. OR, conduct a Phase 2 survey and send Phase 1 and 2 results to USFWS for concurrence. 2) Send a courtesy copy of negative results to USFWS (label as "Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy"). USFWS approval of negative results is not necessary when a qualified surveyor does the survey in full accordance with USFWS guidelines. IF THE PHASE 1 SURVEY IS NOT DONE BY A QUALIFIED SURVEYOR: Send ALL Phase 1 results to USFWS for concurrence, and if potential habitat is found, also send a project description documenting how impacts will be avoided. As a qualified bog turtle surveyor, I _____ (name) certify that I conducted a Phase 1 survey of all wetlands in and within 300 feet of the project area on _____ (date) and determined that bog turtle habitat is absent.

_____ (Signature)

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

*Note: U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:

___ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

___ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

___ SIGNED copy of a Final Project Environmental Review Receipt

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

___ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

___ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Emily Phelan
Company/Business Name: AECOM
Address: 625 W. Ridge Pike, Suite E-100
City, State, Zip: Conshohocken, PA 19428
Phone: (610)832-3651 Fax: (610)832-3501
Email: emily.phelan@aecom.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Phelan,
Emily

applic project proponent signature

Digitally signed by
Phelan, Emily
Date: 2017.09.21
15:00:36 -04'00'

9/21/2017

date

September 26, 2017
NMFS – Enclosure 3

ENCLOSURE 3

NOAA NMFS Essential Fish Habitat Mapper Results

EFH Data Notice: Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Query Results

Map Scale = 1:72,224

Degrees, Minutes, Seconds: Latitude = 39°45'41" N, Longitude = 76°15'42" E

Decimal Degrees: Latitude = 39.76, Longitude = -76.26

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

EFH

No Essential Fish Habitats (EFH) were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

[illegible]

ENCLOSURE 4

TABLE 1: FEDERALLY MANAGED SPECIES OCCURRING IN THE CHESAPEAKE BAY WATERSHED

Species	Scientific Name	Occur in Conowingo Pond	ASMFC	FMP		
				New England	Mid-Atlantic	South-Atlantic
Alewife	<i>Alosa pseudoharengus</i>	X	X	X		
American eel	<i>Anguilla rostrata</i>	X	X			
American shad	<i>Alosa sapidissima</i>	X	X	X		
Atlantic croaker	<i>Micropogonias undulatus</i>		X			
Atlantic menhaden	<i>Brevoortia tyrannus</i>		X			
Atlantic sturgeon	<i>Acipenser oxyrhynchus</i>		X			
Black sea bass	<i>Centropristis striata</i>		X		X	
Blueback herring	<i>Alosa aestivalis</i>	X	X	X		
Bluefish	<i>Pomatomus saltatrix</i>		X		X	
Hickory shad	<i>Alosa mediocris</i>	X	X	X		
Horseshoe crab	<i>Limulus polyphemus</i>		X			
King mackerel	<i>Scomberomorus cavalla</i>					X
Red drum	<i>Sciaenops ocellatus</i>		X			X
Spanish mackerel	<i>Scomberomorus maculatus</i>		X			X
Spot	<i>Leiostomus xanthurus</i>		X			
Spotted seatrout	<i>Cynoscion nebulosus</i>		X			
Striped bass	<i>Morone saxatilis</i>	X	X			
Summer flounder	<i>Paralichthys dentatus</i>		X		X	
Tautog	<i>Tautoga onitis</i>		X			
Weakfish	<i>Cynoscion regalis</i>		X			

Source: AFS (2006)

ENCLOSURE 5

TABLE 2: PRIMARY FORAGE/PREY OF FEDERALLY MANAGED COMMERCIAL FISH SPECIES IN THE CHESAPEAKE BAY WATERSHED

Species	Primary Forage/Prey	Primary Forage in Conowingo Pond?	Notes	Source(s)
Alewife	Zooplankton	Yes	<ul style="list-style-type: none"> Adults do not feed extensively during upstream spawning migrations Larvae and YOY feed exclusively on zooplankton 	Pardue (1983)
American eel	Crabs, clams, small fishes	Yes	<ul style="list-style-type: none"> Opportunistic feeders 	Lippson and Lippson (2006)
American shad	Zooplankton	Yes	<ul style="list-style-type: none"> Little to no feeding during upriver migrations Larvae & juveniles feed on zooplankton aquatic insects Opportunistic feeders 	Stier and Crance (1985)
Atlantic croaker	Mysids, decapods, amphipods, copepods, and polychaetes	No	<ul style="list-style-type: none"> Prey/forage are marine 	Diaz and Onuf (1985)
Atlantic menhaden	Phytoplankton & Zooplankton	Yes	<ul style="list-style-type: none"> Indiscriminant filter feeder 	Rogers and Van Den Avyle (1983)
Atlantic sturgeon	Benthic mollusks and worms	Yes	<ul style="list-style-type: none"> Never recorded above Conowingo Dam 	Lippson and Lippson (2006)
Black sea bass	Arthropods	No	<ul style="list-style-type: none"> Prey/forage are marine 	NOAA (1999a)
Blueback herring	Zooplankton	Yes	<ul style="list-style-type: none"> Adults do not feed extensively during upstream spawning migrations Larvae and YOY feed exclusively on zooplankton 	Pardue (1983)
Bluefish	Fish	Possibly	<ul style="list-style-type: none"> Piscivorous diet tends to target most available prey Primary prey in Chesapeake Bay (Atlantic menhaden) not found in Conowingo Pond 	NOAA (1999b)
Hickory shad	Diet most likely similar to American shad			
Horseshoe crab	Infaunal and epifaunal invertebrates	No	<ul style="list-style-type: none"> Prey/forage are marine 	Botton (1984)
King mackerel	Schooling fish, squid	No	<ul style="list-style-type: none"> Primarily forage on anchovies or clupeids 	Perrotta (2017) Godcharles and Murphy (1986)
Red drum	Fish and crabs	No	<ul style="list-style-type: none"> Prey/forage are primarily marine 	Peacock (2014)
Spanish mackerel	Schooling fish, squid	No	<ul style="list-style-type: none"> Primarily forage on anchovies or clupeids 	Godcharles and Murphy (1986)

Species	Primary Forage/Prey	Primary Forage in Conowingo Pond?	Notes	Source(s)
Spot	Benthic invertebrates	No	• Prey/forage are marine	Stickney and Cuenco (1982)
Spotted seatrout	Anchovies and menhaden	No	• Prey/forage are marine	Lippson and Lippson (2006)
Striped bass	Fish	No	• Prey/forage are primarily marine	Walter et al. (2003)
Summer flounder	Fish	No	• Opportunistic feeders • Prey/forage are primarily marine	NOAA (1999c)
Tautog	Crustaceans	No	• Prey/forage are primarily marine	Lippson and Lippson (2006)
Weakfish	Anchovies and menhaden	No	• Prey/forage are primarily marine	Lippson and Lippson (2006)

ENCLOSURE 6

LIST OF REFERENCES

- American Fisheries Society (AFS) 2006. Fisheries Ecosystem Planning for Chesapeake Bay. Trends in Fisheries Science and Management 3, Bethesda, Maryland.
- Botton, M.L. 1984 Diet and food preferences of the adult horseshoe crab *Limulus polyphemus* in Delaware Bay, New Jersey, USA. Marine Biology Vol. 81, Issue 2, pp. 199-207. August, 1984.
- Diaz, R.J., and C.P. Onuf. 1985. Habitat suitability index models: juvenile Atlantic croaker (revised). U.S. Fish Wildl. Serv. Biol. Rep. 82(10.98). 23 pp,
- Lipson, A.J. and R.L. Lippson. 2006. Life in the Chesapeake Bay. Third Edition. An Illustrated Guide to the Fishes, Invertebrates, Plants, Birds, and Other Inhabitants of the Bays and Inlets from Cape Cod to Cape Hatteras. The Johns Hopkins University Press. Baltimore, MD.
- National Oceanic and Atmospheric Administration (NOAA). 1999a. Essential Fish Habitat Source Document: Black Sea Bass, *Centropristis striata*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-143. September, 1999.
- NOAA. 1999b. Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-144. September, 1999.
- NOAA. 1999c. Essential Fish Habitat Source Document: Summer Flounder, *Paralichthys dentatus*, Life History and Habitat Characteristics. NOAA Technical Memorandum NMFS-NE-151. September, 1999.
- Pardue, G.B. 1983. Habitat suitability index models: alewife and blueback herring. U.S. Dept. Int. Fish Wildl. Serv. FWS/OBS-82/10.58. 22 pp.
- Peacock, T. 2014. A Synthesis of Red Drum Feeding Ecology and Diets from North Carolina and South Carolina.
- Perrotta, T. 2017. *Scomberomorus cavalla*; King Mackerel. Ichthyology Collection: Florida Museum of Natural History. University of Florida. Gainesville, FL. Accessed August 2017. <https://www.floridamuseum.ufl.edu/fish/discover/species-profiles/scomberomorus-cavalla/>.
- Rogers, S.G., and M.J. Van Den Avyle. 1983. Species Profiles: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates (South Atlantic) -- Atlantic Menhaden. U.S. Fish and Wildlife Service, Division of Biological Services, FWS/OBS-82/11.11. U. S. Army Corps of Engineers, TR EL-82-4. 20 pp.
- Stickney, R.R., and N.L. Cuenca. 1982. Habitat Suitability Index Models: Juvenile Spot. U.S. Dept. Int. Fish Wildl. Serv. FWS/OBS-82/10.20. 12 pp.
- Stier, D.J., and J.H. Crance. 1985. Habitat suitability index models and instream flow suitability curves: American shad. U.S. Fish Wildl. Serv. Biol. Rep. 82(10.88). 34 pp.
- Walter, J.F., A.S. Overton, K.H. Ferry, M.E. Mather. 2003. Atlantic coast feeding habits of striped bass: a synthesis supporting a coast-wide understanding of trophic biology. Fisheries Management and Ecology. Volume 10. Pp. 349-360.

MAR - 5 2018



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

Michael P. Gallagher
Exelon Nuclear
200 Exelon Way
Kennett Square, PA 19348

Dear Mr. Gallagher

Exelon is preparing materials to support your second license renewal application for the Peach Bottom Atomic Power Station Units 2 and 3. It is our understanding that the license renewal would not consider any new construction or any changes in project operations. You have requested information on resources managed by NOAA's National Marine Fisheries Service that may need to be considered during your license renewal.

Endangered Species Act (ESA)

Atlantic and shortnose sturgeon are listed under the ESA. Sturgeon are known to occur in the Susquehanna River; however, they do not occur upstream of the Conowingo Dam. It is not clear from the materials you have provided if effects of project operations extend downstream of the Conowingo Dam; consultation pursuant to section 7 of the ESA would be required if the continued operations of Peach Bottom Units 2 and 3 may affect either species (e.g., if the withdrawal or discharge of water to Conowingo Pond impacted water quality below the dam in a way that may affect either sturgeon species). More information on shortnose and Atlantic sturgeon and the ESA section 7 consultation process is available on our webpage:
<https://www.greateratlantic.fisheries.noaa.gov/protected/section7/index.html>.

Magnuson Stevens Fishery Conservation and Management Act (MSA)

Section 305 (b)(2) of the MSA requires all federal agencies to consult with us on any action authorized, funded, or undertaken by that agency that may adversely affect essential fish habitat (EFH). This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments, lists the required contents of EFH assessments, and generally outlines each agency's obligations in this consultation procedure.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states an adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components.

Although EFH has not been designated within Conowingo Pond for any federally managed species, it has been designated for a number of species downstream of the Conowingo Dam within the estuarine portions of the Chesapeake Bay. Species for which EFH has been designated in these areas include, but are not limited to, bluefish (*Pomatomus saltatrix*), scup (*Stenotomus chrysops*), black sea bass (*Centropristis striata*), summer flounder (*Paralichthys*



dentatus), windowpane flounder (*Scophthalmus aquosus*), clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), and winter skate (*Leucoraja ocellata*).

While the Conowingo Dam limits migratory fish species, especially American shad (*Alosa sapidissima*), from swimming further up the Susquehanna River to spawn, fish passage structures have been installed. As a result, alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), American eel (*Anguilla rostrata*), American shad, hickory shad (*Alosa mediocris*) and striped bass (*Morone saxatilis*) have all been found within Conowingo Pond. Buckel and Conover (1997) reports that diet items of juvenile bluefish include *Alosa* species such as those found in Conowingo Pond. Juvenile *Alosa* species have all been identified as prey species for windowpane flounder, summer flounder, scup, little skate, and winter skate in Steimle et al. (2000).

Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. The rule also states that the loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, actions that reduce the availability of a major prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may be considered adverse effects on EFH if such actions reduce the quality of EFH.

Because impacts to EFH can result from impacts to prey species and from water quality degradation, and can result from actions within or outside of areas designated as EFH, the operation of the Peach Bottom Atomic Power Station could have indirect adverse effects to EFH. As the license renewal process moves forward, we recommend that any studies and monitoring to be done consider diadromous fish species, as well as water quality effects. In our 2016 comments on the Post-EPU Thermal and Biological Monitoring Study Plan (Revision 1, July 2015), and (2) Revised Scope of Work for Peach Bottom Atomic Power Station's Entrainment Abundance and Latent Impingement Mortality Characterization (Revision 2, 28 January 2016), we recommended the following:

- Extend the thermal monitoring window, and associated biological monitoring, to include the months of April, October, and November to more fully overlap known upstream and downstream migration periods for American shad, river herring and American eel in future studies (not recommended for the currently proposed study plan).
- Extend DO monitoring to include June and September, as the potential exists for warm water temperatures combined with low flows to cause low DO issues (including potential for stratification) during those months.
- Consider additional DO monitoring stations in order to compare results from these stations to those of stations where PBAPS thermal impacts are less likely.
- Conduct annual impingement monitoring from October through December to document impingement impacts from the project on downstream migrating American shad, river herring, and American eel, in addition to the proposed impingement study.

We also recommend that efforts to minimize impingement and entrainment be continued to be explored and evaluated throughout the relicensing process and for as long as the plant continues to withdraw water from Conowingo Pond.

If you have questions regarding EFH, please contact Kristy Beard in our Annapolis, MD field office at kristy.beard@noaa.gov or (410) 573-4542, or Karen Greene in our Sandy Hook, NJ office at karen.greene@noaa.gov or (732) 872-3023. Questions regarding the ESA can be directed to me at (978) 282-8480 or by email (Julie.Crocker@noaa.gov).

Sincerely,



Julia E. Crocker

Acting Assistant Regional Administrator
for Protected Resources

EC: Crocker, F/GAR3
Greene, F/GAR4

Literature Cited

Buckel, J.A. and D.O. Conover. 1997. Movements, feeding periods, and daily ration of piscivorous young-of-the-year bluefish, *Pomatomus saltatrix*, in the Hudson River estuary. Fish. Bull. (U.S.) 95(4):665-679.

Steimle, F.W., R.A. Pikanowski, D.G. McMillan, C.A. Zetlin, S.J. Wilk. 2000. Demersal fish and American lobster diets in the Lower Hudson-Raritan Estuary. NOAA Technical Memorandum NMFS-NE-161. Woods Hole, MA. 106 p.



Michael P. Gallagher
Exelon Nuclear
Vice President
License Renewal and Decommissioning

200 Exelon Way
Kennett Square, PA 19348

610 765 5958 Office
610 765 5658 Fax
www.exeloncorp.com

michaelp.gallagher@exeloncorp.com

September 26, 2017

Christopher Urban, Chief
Division of Environmental Services, PFBC
450 Robinson Lane
Bellefonte, PA 16823

Re: Peach Bottom Atomic Power Station, Units 2 and 3
Second Renewal of U.S. Nuclear Regulatory Commission Operating Licenses
Request for Information on Special Status Species

Dear Mr. Urban:

In the third quarter of 2018, Exelon Generation Company, LLC (Exelon Generation; a subsidiary of Exelon Corporation) plans to apply to the U.S. Nuclear Regulatory Commission (NRC) for the second renewal of the operating licenses for Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3. Renewal by the NRC of the operating licenses would give Exelon Generation and the State of Pennsylvania the option of relying on PBAPS to meet future baseload power generating needs. Unit 2 began operating in 1973, and the existing license for Unit 2 will expire in August 2033. Unit 3 began operating in 1974, and the existing license for Unit 3 will expire in July 2034. The renewal term for each unit would be an additional twenty years beyond the existing license expiration date.

The NRC requires that license renewal applications include environmental reports assessing potential environmental impacts from license renewal activities. One such impact would be effects of license renewal activities on special status species that are listed or proposed for listing in accordance with the Endangered Species Act (ESA) (16 USC 1531, et seq.) (10 CFR 51.53(c)(3)(ii)(E)). Accordingly, we are contacting you to obtain input for use in addressing these effects in the PBAPS second license renewal environmental report. Later, NRC may also request an informal consultation with your office under Section 7 of the ESA (16 USC 1536(a)).

Activities during the License Renewal Terms

PBAPS second license renewal will involve no new construction, refurbishment, ground disturbing activities, changes to operations, or changes to existing land-use conditions. Operation and maintenance activities during the terms of the renewed PBAPS licenses are only expected to occur in previously disturbed areas or existing rights-of-way (ROWs). Hence, no new adverse impacts to special status species are anticipated from second license renewal.

Project Features

PBAPS existing features that are relevant to the effects on special status species during the renewed license terms include the following:

1. The PBAPS plant site, which hosts the two generating units, is located on 620 acres of Exelon Generation-owned property located near Delta, Pennsylvania, primarily in Peach Bottom Township, York County, Pennsylvania on the west side of Conowingo Pond, which was created by the construction of the Conowingo dam on the Susquehanna River in 1928. The area within 6 miles of the site includes parts of York and Lancaster Counties in Pennsylvania and sections of Harford and Cecil Counties in Maryland.
2. PBAPS is approved by the Susquehanna River Basin Commission (SRBC) to withdraw water from the Conowingo Pond to cool the condensers in a once-through heat dissipation system. Second license renewal requires no change to this authorization. The principal components of the circulating water system are the outer intake structure, intake basins, inner intake structure, condensers, discharge basin, helper cooling towers, discharge canal, and discharge structure.
 - a. Cooling water is withdrawn at a 148-meter-long (487-foot-long) outer intake structure on the west bank of Conowingo Pond.
 - b. After passing through the outer intake structure and travelling screens, circulating water enters a system of intake basins, followed by screens, and pumps, which comprise the inner intake structure. From the inner intake structure, the circulating water is pumped through the two main condensers where steam exiting the plant's turbine generators is cooled.
 - c. Heated cooling water from both units is discharged from the condensers into a cooling water discharge pond that directs the cooling water to the helper cooling towers and/or into the 1,430 m-long (4,700 ft-long) discharge canal, which carries it back to Conowingo Pond.
3. Discharges to Conowingo Pond of heated cooling water and other wastewaters are authorized by NPDES Permit No. PA0009733. Among the discharge limitations specified in the NPDES permit are (1) a requirement to implement the PBAPS procedure for reducing the temperature of water in the discharge canal when such water reaches 110 degrees F and (2) a requirement to operate the cooling towers during specific times and conditions. Second license renewal requires no change to the NPDES Permit.
4. Existing PBAPS transmission system components that would be removed from service if the NRC did not approve second license renewal are relevant to the effects on special status species of second license renewal. Such components include the following:
 - a. Two 500-kV generator tie lines, which traverse only onsite property used for industrial purposes and serve to connect the main power transformer of each unit to its onsite substation (south substation for Unit 2 and north substation for Unit 3).
 - b. One 34.5-kV submarine cable, which supplies power to the PBAPS units for safe shutdown if all other offsite power supplies as well as power from onsite diesel generators is unavailable. This 34.5-kV submarine cable is powered from the 33 kV bus at Susquehanna Substation (adjacent to the Conowingo Dam) and is routed either underwater or underground for most of its length before connecting to the PBAPS Station Blackout substation located near Unit 1.

- c. Three sources of startup auxiliary power that connect to 13-kV startup switchgear at the station:
 - i. A 220-kV line that traverses only onsite property used for industrial purposes and connects to the plant from equipment located near the north substation.
 - ii. An onsite, underground, dedicated 13-kV line that connects to the plant from equipment located near the north substation.
 - iii. An onsite, mostly underground, dedicated 13-kV line that connects to the plant from equipment collocated with the north substation.

The enclosed Figure 1 shows the locations of the existing PBAPS project features relevant to the effects of second license renewal on special status species and the full extent of the project area for the second license renewal.

Identification of Special Status Species Resources

Using the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool, a web-based application sponsored by the Pennsylvania Natural Heritage Program (PNHP), Exelon Generation has reviewed the potential for the PBAPS license renewal to adversely affect known occurrences of species or natural communities of concern. The enclosed receipt for PNDI search ID PNDI-617811 states that the project could potentially impact the Chesapeake logperch (*Percina bimaculata*), which is state-listed as threatened.

Because the second license renewal involves no new construction, refurbishment, ground disturbing activities, changes to operation, or changes to existing land-use conditions, Exelon Generation does not expect new adverse effects from the PBAPS second license renewal to special status reptile, amphibian, fish, and invertebrate species located near the PBAPS site, circulating water supply system, or transmission facilities. Nevertheless, we are requesting your help to identify issues we may have overlooked that need to be addressed in the PBAPS second license renewal environmental report. We are also interested in learning of any information your staff believes could help expedite the NRC's review of the PBAPS second license renewal application. Hence, in closing, we would appreciate receiving a response from you detailing such issues and information for the PBAPS site. We would also welcome your confirmation of our conclusion that PBAPS second license renewal would not adversely affect special status reptile, amphibian, fish, and invertebrate species.

Because we plan to incorporate a copy of your response, as well as this letter, into the PBAPS second license renewal environmental report that will be submitted to the NRC as part of the PBAPS second license renewal application, your response will be most helpful if we receive it by November 10, 2017.

September 26, 2017
Urban – 4

Please call Nancy Ranek (610-765-5369) or my staff if there are questions or you require additional information.

Sincerely,

A handwritten signature in black ink, reading "Michael P. Gallagher", is displayed on a light gray rectangular background.

Michael P. Gallagher

Enclosures:

1. Figure 1 Site Boundary
2. Receipt for PNDI Search ID PNDI-617811

September 26, 2017
Urban – Enclosure 1

ENCLOSURE 1

Figure 1 Site Boundary

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040

September 26, 2017
Urban – Enclosure 2

ENCLOSURE 2

Receipt for PNDI Search ID PNDI-617811

1. PROJECT INFORMATION

Project Name: **PBAPS_DraftER2016**

Date of Review: **9/21/2017 02:26:19 PM**

Project Category: **Energy Storage, Production, and Transfer, Energy Production (generation), Other**

Project Area: **774.51 acres**

County(s): **Lancaster; York**

Township/Municipality(s): **DRUMORE; FULTON; PEACH BOTTOM**

ZIP Code: **17314**

Quadrangle Name(s): **DELTA; HOLTWOOD**

Watersheds HUC 8: **Lower Susquehanna**

Watersheds HUC 12: **Fishing Creek-Susquehanna River**

Decimal Degrees: **39.756246, -76.270233**

Degrees Minutes Seconds: **39° 45' 22.4849" N, 76° 16' 12.8400" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	Potential Impact	MORE INFORMATION REQUIRED, See Agency Response

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

PBAPS_DraftER2016

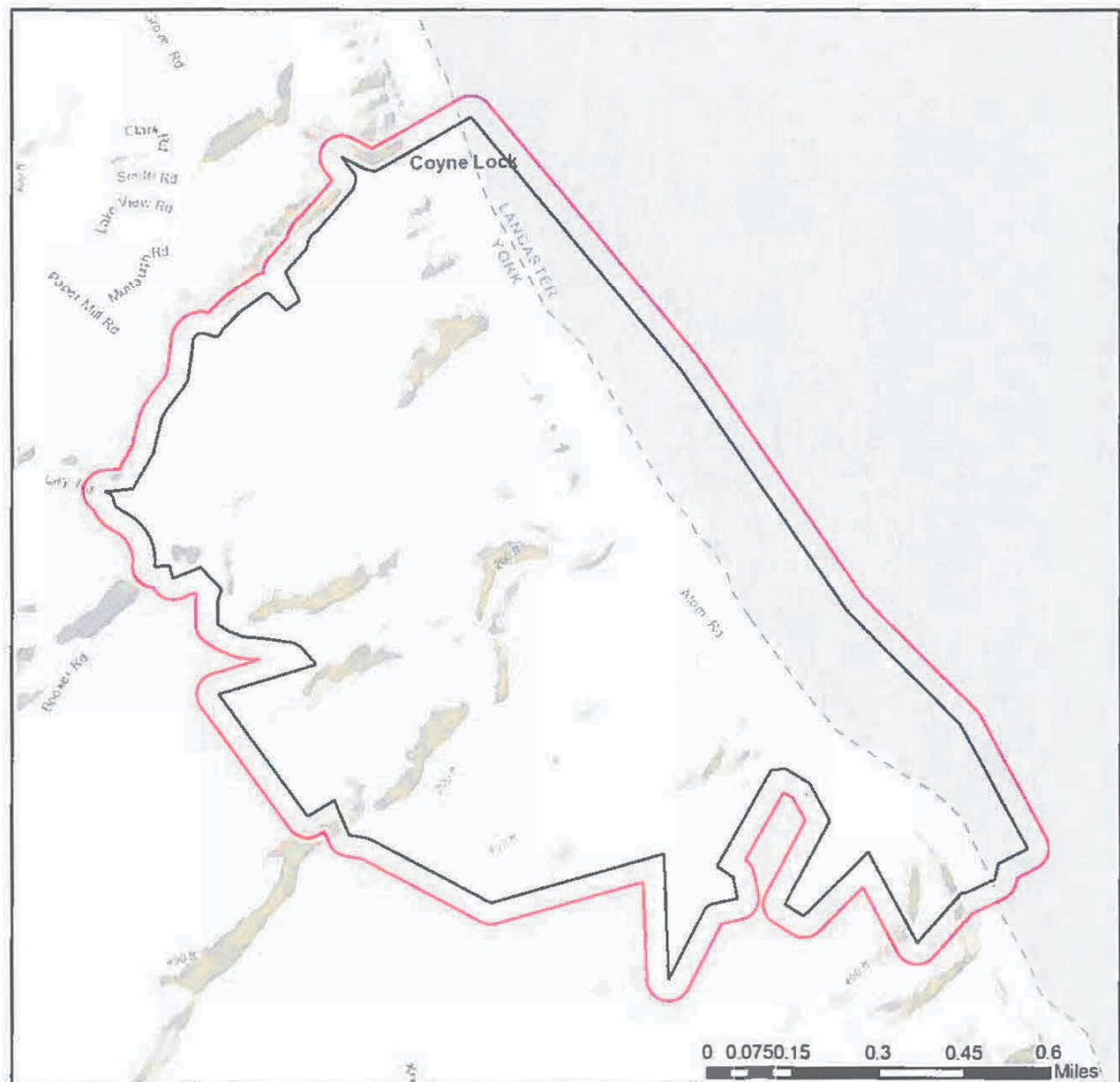


- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user

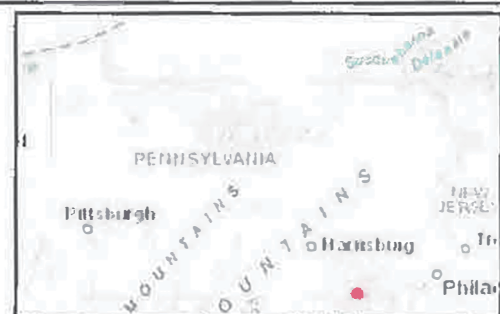


PBAPS_DraftER2016



- Project Boundary
- Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESPONSE TO QUESTION(S) ASKED

Q1: Which of the following closest describes the proposed project?

Your answer is: A well or other groundwater extraction (e.g., groundwater pumping to facilitate mining, pump-and-treat operation) is proposed as part of this project, or in order to support some aspect of the project, but less than 1000 gallons per day will be extracted.

Q2: Are there any perennial or intermittent waterways (rivers, streams, creeks, tributaries) in or near the project area, or on the land parcel?

Your answer is: Yes

Q3: Describe how wastewater (effluent) will be handled (select one). For the purpose of this question, wastewater/effluent does not include stormwater runoff. If the project involves solely the renewal or modification of an existing discharge permit (e.g., NPDES permit), select from options 3, 4, 5, or 6 below.

Your answer is: Some or all wastewater/effluent from this project/activity will be discharged to a waterway (river or stream), and the discharge (including the existing discharge, plus any additional discharge) will exceed 5000 gallons/day.

Q4: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: The project area (or land parcel) has not been investigated by someone qualified to identify and delineate wetlands, or it is currently unknown if the project or project activities will affect wetlands.

Q5: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q6: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:

<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Asplenium pinnatifidum	Lobed Spleenwort	Special Concern Species*	Special Concern Species*	Year-round (evergreen)
Erigenia bulbosa	Harbinger-of-spring	Threatened	Special Concern Species*	Flowers March - April
Ilex opaca	American Holly	Threatened	Threatened	Flowers May - early June, fruits October - winter; evergreen leaves
Sensitive Species**		Special Concern Species*	Threatened	

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Percina bimaculata	Chesapeake Logperch	Threatened

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2006). Evaluate all wetlands within 300 feet of the project area, which includes all areas that will be impacted by earth disturbance or project features (e.g., roads, structures, utility lines, lawns, detention basins, staging areas, etc.). IF THE PHASE 1 SURVEY IS DONE BY A QUALIFIED BOG TURTLE SURVEYOR (see <https://www.fws.gov/northeast/pafo/endangered/surveys.html>): 1) Send positive results to USFWS for concurrence, along with a project description documenting how impacts will be avoided. OR, conduct a Phase 2 survey and send Phase 1 and 2 results to USFWS for concurrence. 2) Send a courtesy copy of negative results to USFWS (label as "Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy"). USFWS approval of negative results is not necessary when a qualified surveyor does the survey in full accordance with USFWS guidelines. IF THE PHASE 1 SURVEY IS NOT DONE BY A QUALIFIED SURVEYOR: Send ALL Phase 1 results to USFWS for concurrence, and if potential habitat is found, also send a project description documenting how impacts will be avoided. As a qualified bog turtle surveyor, I _____ (name) certify that I conducted a Phase 1 survey of all wetlands in and within 300 feet of the project area on _____ (date) and determined that bog turtle habitat is absent.

_____ (Signature)

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

*Note: U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:

___ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

___ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

___ SIGNED copy of a Final Project Environmental Review Receipt

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

___ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

___ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Emily Phelan
Company/Business Name: AECOM
Address: 625 W. Ridge Pike, Suite E-100
City, State, Zip: Conshohocken, PA 19428
Phone: (610)832-3651 Fax: (610)832-3501
Email: emily.phelan@aecom.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Phelan,

Digitally signed by
Phelan, Emily
Date: 2017.09.21

Emily

applic up of project proponent signature

9/21/2017

date



Pennsylvania Fish & Boat Commission

Division of Environmental Services

Natural Diversity Section
595 E Rolling Ridge Dr.
Bellefonte, PA 16823
814-359-5237

March 8, 2018

IN REPLY REFER TO

SIR# 48468

AECOM
Emily Phelan
625 W. Ridge Pike
Conshohocken, Pennsylvania 19428

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search No. 617811_1
PBAPS_DraftER2016
LANCASTER County: Drumore Township, Fulton Township - YORK County: Peach
Bottom Township**

Dear Emily Phelan:

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 (PFBC) jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the PNDI database and our own files. These species of special concern are listed under the Endangered Species Act (ESA) of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

The Chesapeake Logperch, *Percina bimaculata*, is known from the vicinity of this project. It is a Pennsylvania listed threatened fish species within the perches and darters family, Percidae. In Pennsylvania, the Chesapeake Logperch is restricted in distribution to the Conowingo Pool of the lower Susquehanna River and a few of its tributaries in Lancaster and York counties. It is globally rare, occurring in only one other state, Maryland, where it is considered state threatened. The Chesapeake Logperch is also under consideration by the U.S. Fish and Wildlife Service for potential listing under the ESA. The PFBC is aware that Chesapeake Logperch are impinged at the Peach Bottom Atomic Power Station (PBAPS). The PFBC has also been made aware that impingement and entrainment studies are currently being conducted at the PBAPS. The PFBC is concerned about the effects that the PBAPS may be having on the local Chesapeake Logperch population.

The PFBC understands that no change to operations is being proposed as part of the second renewal of the U.S. Nuclear Regulatory Commission operating license. The PFBC met with Nancy Ranek, a representative of Exelon, on 5 February 2018 at which time she detailed the operations at

Our Mission:

www.fish.state.pa.us

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

PBAPS and their permit renewal process. As a result, the PFBC intends to address the Chesapeake Logperch impingement and entrainment concerns with the PBAPS during the National Pollutant Discharge Elimination System (NPDES) permit renewal process and through a biological assessment – biological opinion approach to characterizing the potential impacts on Chesapeake Logperch. This approach is an in-depth analysis of a permitted action and alternatives and allows for incidental take of a state listed species by avoiding, minimizing, and mitigating the loss of the state listed species.

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 Doug Fischer at 814-359-5195 and refer to the SIR # 48468. Thank you for your cooperation and attention to this important matter of species conservation and habitat protection.

Sincerely,

A handwritten signature in black ink that reads "Christopher A. Urban". The signature is fluid and cursive, with the first name being the most prominent.

Christopher A. Urban, Chief
Natural Diversity Section

CAU/DF/dn



Michael P. Gallagher
Exelon Nuclear
Vice President
License Renewal and Decommissioning

200 Exelon Way
Kennett Square, PA 19348

610 765 5958 Office
610 765 5658 Fax
www.exeloncorp.com

michaelp.gallagher@exeloncorp.com

September 26, 2017

Peter Sussenbach, Director
Pennsylvania Game Commission, Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

Re: Peach Bottom Atomic Power Station, Units 2 and 3
Second Renewal of U.S. Nuclear Regulatory Commission Operating Licenses
Request for Information on Special Status Species

Dear Mr. Sussenbach:

In the third quarter of 2018, Exelon Generation Company, LLC (Exelon Generation; a subsidiary of Exelon Corporation) plans to apply to the U.S. Nuclear Regulatory Commission (NRC) for the second renewal of the operating licenses for Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3. Renewal by the NRC of the operating licenses would give Exelon Generation and the State of Pennsylvania the option of relying on PBAPS to meet future baseload power generating needs. Unit 2 began operating in 1973, and the existing license for Unit 2 will expire in August 2033. Unit 3 began operating in 1974, and the existing license for Unit 3 will expire in July 2034. The renewal term for each unit would be an additional twenty years beyond the existing license expiration date.

The NRC requires that license renewal applications include environmental reports assessing potential environmental impacts from license renewal activities. One such impact would be effects of license renewal activities on special status species that are listed or proposed for listing in accordance with the Endangered Species Act (ESA) (16 USC 1531, et seq.) (10 CFR 51.53(c)(3)(ii)(E)). Accordingly, we are contacting you to obtain input for use in addressing these effects in the PBAPS second license renewal environmental report. Later, NRC may also request an informal consultation with your office under Section 7 of the ESA (16 USC 1536(a)).

Activities during the License Renewal Terms

PBAPS second license renewal will involve no new construction, refurbishment, ground disturbing activities, changes to operations, or changes to existing land-use conditions. Operation and maintenance activities during the terms of the renewed PBAPS licenses are only expected to occur in previously disturbed areas or existing rights-of-way (ROWs). Hence, no new adverse impacts to special status species are anticipated from second license renewal.

Project Features

PBAPS existing features that are relevant to the effects on special status species during the renewed license terms include the following:

1. The PBAPS plant site, which hosts the two generating units, is located on 620 acres of Exelon Generation-owned property located near Delta, Pennsylvania, primarily in Peach Bottom Township, York County, Pennsylvania on the west side of Conowingo Pond, which was created by the construction of the Conowingo dam on the Susquehanna River in 1928. The area within 6 miles of the site includes parts of York and Lancaster Counties in Pennsylvania and sections of Harford and Cecil Counties in Maryland.
2. PBAPS is approved by the Susquehanna River Basin Commission (SRBC) to withdraw water from the Conowingo Pond to cool the condensers in a once-through heat dissipation system. Second license renewal requires no change to this authorization. The principal components of the circulating water system are the outer intake structure, intake basins, inner intake structure, condensers, discharge basin, helper cooling towers, discharge canal, and discharge structure.
 - a. Cooling water is withdrawn at a 148-meter-long (487-foot-long) outer intake structure on the west bank of Conowingo Pond.
 - b. After passing through the outer intake structure and travelling screens, circulating water enters a system of intake basins, followed by screens, and pumps, which comprise the inner intake structure. From the inner intake structure, the circulating water is pumped through the two main condensers where steam exiting the plant's turbine generators is cooled.
 - c. Heated cooling water from both units is discharged from the condensers into a cooling water discharge pond that directs the cooling water to the helper cooling towers and/or into the 1,430 m-long (4,700 ft-long) discharge canal, which carries it back to Conowingo Pond.
3. Discharges to Conowingo Pond of heated cooling water and other wastewaters are authorized by NPDES Permit No. PA0009733. Among the discharge limitations specified in the NPDES permit are (1) a requirement to implement the PBAPS procedure for reducing the temperature of water in the discharge canal when such water reaches 110 degrees F and (2) a requirement to operate the cooling towers during specific times and conditions. Second license renewal requires no change to the NPDES Permit.
4. Existing PBAPS transmission system components that would be removed from service if the NRC did not approve second license renewal are relevant to the effects on special status species of second license renewal. Such components include the following:
 - a. Two 500-kV generator tie lines, which traverse only onsite property used for industrial purposes and serve to connect the main power transformer of each unit to its onsite substation (south substation for Unit 2 and north substation for Unit 3).
 - b. One 34.5-kV submarine cable, which supplies power to the PBAPS units for safe shutdown if all other offsite power supplies as well as power from onsite diesel generators is unavailable. This 34.5-kV submarine cable is powered from the 33 kV bus at Susquehanna Substation (adjacent to the Conowingo Dam) and is routed either underwater or underground for most of its length before connecting to the PBAPS Station Blackout substation located near Unit 1.

- c. Three sources of startup auxiliary power that connect to 13-kV startup switchgear at the station:
 - i. A 220-kV line that traverses only onsite property used for industrial purposes and connects to the plant from equipment located near the north substation.
 - ii. An onsite, underground, dedicated 13-kV line that connects to the plant from equipment located near the north substation.
 - iii. An onsite, mostly underground, dedicated 13-kV line that connects to the plant from equipment collocated with the north substation.

The enclosed Figure 1 shows the locations of the existing PBAPS project features relevant to the effects of second license renewal on special status species and the full extent of the project area for the second license renewal.

Identification of Special Status Species Resources

Using the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool, a web-based application sponsored by the Pennsylvania Natural Heritage Program (PNHP), Exelon Generation has reviewed the potential for the PBAPS license renewal to adversely affect known occurrences of species or natural communities of concern. The enclosed receipt for PNDI search ID PNDI-617811 identifies no species of concern to the Pennsylvania Game Commission that the project could potentially impact. However, osprey (*Pandion haliaetus*), which is state-listed as threatened, are known to have nested within the boundary of the PBAPS site.

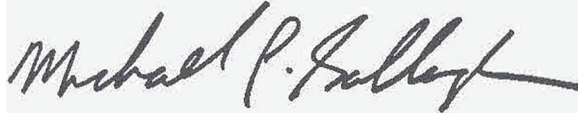
Because the second license renewal involves no new construction, refurbishment, ground disturbing activities, changes to operation, or changes to existing land-use conditions, Exelon Generation does not expect new adverse effects from the PBAPS second license renewal to special status mammal and bird species located near the PBAPS site, circulating water supply system, or transmission facilities. Nevertheless, we are requesting your help to identify issues we may have overlooked that need to be addressed in the PBAPS second license renewal environmental report. We are also interested in learning of any information your staff believes could help expedite the NRC's review of the PBAPS second license renewal application. Hence, in closing, we would appreciate receiving a response from you detailing such issues and information for the PBAPS site. We would also welcome your confirmation of our conclusion that PBAPS second license renewal would not adversely affect the osprey or other special status mammal and bird species.

Because we plan to incorporate a copy of your response, as well as this letter, into the PBAPS second license renewal environmental report that will be submitted to the NRC as part of the PBAPS second license renewal application, your response will be most helpful if we receive it by November 10, 2017.

September 26, 2017
Sussenbach – 4

Please call Nancy Ranek (610-765-5369) of my staff if there are questions or you require additional information.

Sincerely,

A handwritten signature in black ink, reading "Michael P. Gallagher", is displayed on a light gray rectangular background.

Michael P. Gallagher

Enclosures:

1. Figure 1 Site Boundary
2. Receipt for PNDI Search ID PNDI-617811

ENCLOSURE 1

Figure 1 Site Boundary

September 26, 2017
Sussenbach – Enclosure 2

ENCLOSURE 2

Receipt for PNDI Search ID PNDI-617811

1. PROJECT INFORMATION

Project Name: **PBAPS_DraftER2016**

Date of Review: **9/21/2017 02:26:19 PM**

Project Category: **Energy Storage, Production, and Transfer, Energy Production (generation), Other**

Project Area: **774.51 acres**

County(s): **Lancaster; York**

Township/Municipality(s): **DRUMORE; FULTON; PEACH BOTTOM**

ZIP Code: **17314**

Quadrangle Name(s): **DELTA; HOLTWOOD**

Watersheds HUC 8: **Lower Susquehanna**

Watersheds HUC 12: **Fishing Creek-Susquehanna River**

Decimal Degrees: **39.756246, -76.270233**

Degrees Minutes Seconds: **39° 45' 22.4849" N, 76° 16' 12.8400" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	Potential Impact	MORE INFORMATION REQUIRED, See Agency Response

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

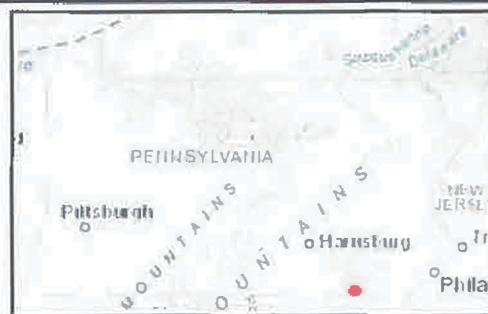
Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

PBAPS_DraftER2016

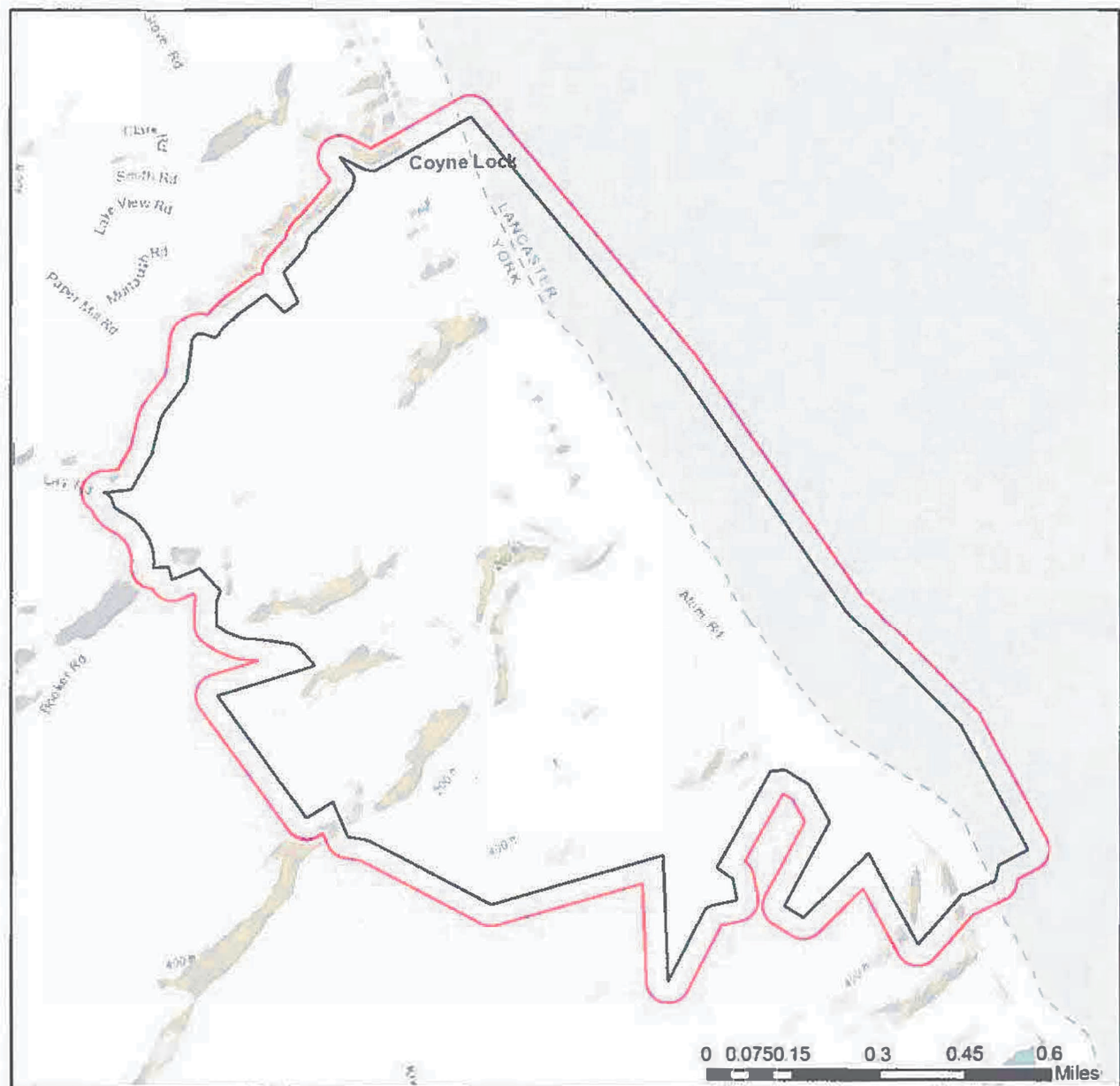


- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user

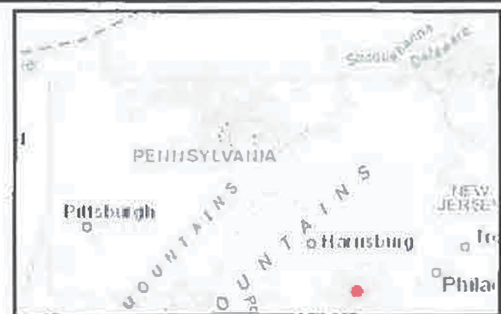


PBAPS_DraftER2016



- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESPONSE TO QUESTION(S) ASKED

Q1: Which of the following closest describes the proposed project?

Your answer is: A well or other groundwater extraction (e.g., groundwater pumping to facilitate mining, pump-and-treat operation) is proposed as part of this project, or in order to support some aspect of the project, but less than 1000 gallons per day will be extracted.

Q2: Are there any perennial or intermittent waterways (rivers, streams, creeks, tributaries) in or near the project area, or on the land parcel?

Your answer is: Yes

Q3: Describe how wastewater (effluent) will be handled (select one). For the purpose of this question, wastewater/effluent does not include stormwater runoff. If the project involves solely the renewal or modification of an existing discharge permit (e.g., NPDES permit), select from options 3, 4, 5, or 6 below.

Your answer is: Some or all wastewater/effluent from this project/activity will be discharged to a waterway (river or stream), and the discharge (including the existing discharge, plus any additional discharge) will exceed 5000 gallons/day.

Q4: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected – either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: The project area (or land parcel) has not been investigated by someone qualified to identify and delineate wetlands, or it is currently unknown if the project or project activities will affect wetlands.

Q5: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q6: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:

<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Asplenium pinnatifidum	Lobed Spleenwort	Special Concern Species*	Special Concern Species*	Year-round (evergreen)
Erigenia bulbosa	Harbinger-of-spring	Threatened	Special Concern Species*	Flowers March - April
Ilex opaca	American Holly	Threatened	Threatened	Flowers May - early June, fruits October - winter, evergreen leaves
Sensitive Species**		Special Concern Species*	Threatened	

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Percina bimaculata	Chesapeake Logperch	Threatened

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2006). Evaluate all wetlands within 300 feet of the project area, which includes all areas that will be impacted by earth disturbance or project features (e.g., roads, structures, utility lines, lawns, detention basins, staging areas, etc.). IF THE PHASE 1 SURVEY IS DONE BY A QUALIFIED BOG TURTLE SURVEYOR (see <https://www.fws.gov/northeast/pafo/endangered/surveys.html>): 1) Send positive results to USFWS for concurrence, along with a project description documenting how impacts will be avoided. OR, conduct a Phase 2 survey and send Phase 1 and 2 results to USFWS for concurrence. 2) Send a courtesy copy of negative results to USFWS (label as "Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy"). USFWS approval of negative results is not necessary when a qualified surveyor does the survey in full accordance with USFWS guidelines. IF THE PHASE 1 SURVEY IS NOT DONE BY A QUALIFIED SURVEYOR: Send ALL Phase 1 results to USFWS for concurrence, and if potential habitat is found, also send a project description documenting how impacts will be avoided. As a qualified bog turtle surveyor, I _____ (name) certify that I conducted a Phase 1 survey of all wetlands in and within 300 feet of the project area on _____ (date) and determined that bog turtle habitat is absent.

_____ (Signature)

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

*Note: U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:

____ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

____ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

____ SIGNED copy of a Final Project Environmental Review Receipt

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

____ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

____ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Emily Phelan
Company/Business Name: AECOM
Address: 625 W. Ridge Pike, Suite E-100
City, State, Zip: Conshohocken, PA 19428
Phone: (610)832-3651 Fax: (610)832-3501
Email: emily.phelan@aecom.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Phelan,

Digitally signed by
Phelan, Emily

Date: 2017.09.21

15:00:36 -04'00'

Emily

applic Up project proponent signature

9/21/2017

date



Date: October 3, 2017

To: FILE

Cc: Carrie Cunnane, AECOM
Bobbie Hurley, AECOM

From: Nancy L. Ranek

Subject: Peach Bottom Atomic Power Station, Units 2 & 3, SLR Environmental Report
Pennsylvania Game Commission – Consultation Letter

No. of Pages: 1

Today, I received a phone call from the Pennsylvania Game Commission (PGC). The caller indicated that the PGC had received Exelon Generation's consultation letter dated 9/26/2017 requesting PGC comments regarding potential impacts from renewal of the NRC operating license for Peach Bottom Atomic Power Station, Units 2 and 3. She stated that the PGC response recorded on the PNDI receipt (dated 9/21/2017) for this project would be the only response that PGC will make. PGC will not send a separate response to Exelon Generation's consultation letter.

According to the 9/21/2017 PNDI receipt, PGC's response was as follows:

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required

nlr



Michael P. Gallagher
Exelon Nuclear
Vice President
License Renewal and Decommissioning

200 Exelon Way
Kennett Square, PA 19348

610-765-5958 Office
610-765-5658 Fax
www.exeloncorp.com

michaelp.gallagher@exeloncorp.com

September 26, 2017

Rebecca H. Bowen, Chief
Ecological Services Section, Bureau of Forestry, Pennsylvania DCNR
400 Market Street, P.O. Box 8552
Harrisburg, PA 17105-8552

Re: Peach Bottom Atomic Power Station, Units 2 and 3
Second Renewal of U.S. Nuclear Regulatory Commission Operating Licenses
Request for Information on Special Status Species

Dear Ms. Bowen:

In the third quarter of 2018, Exelon Generation Company, LLC (Exelon Generation; a subsidiary of Exelon Corporation) plans to apply to the U.S. Nuclear Regulatory Commission (NRC) for the second renewal of the operating licenses for Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3. Renewal by the NRC of the operating licenses would give Exelon Generation and the State of Pennsylvania the option of relying on PBAPS to meet future baseload power generating needs. Unit 2 began operating in 1973, and the existing license for Unit 2 will expire in August 2033. Unit 3 began operating in 1974, and the existing license for Unit 3 will expire in July 2034. The renewal term for each unit would be an additional twenty years beyond the existing license expiration date.

The NRC requires that license renewal applications include environmental reports assessing potential environmental impacts from license renewal activities. One such impact would be effects of license renewal activities on special status species that are listed or proposed for listing in accordance with the Endangered Species Act (ESA) (16 USC 1531, et seq.) (10 CFR 51.53(c)(3)(ii)(E)). Accordingly, we are contacting you to obtain input for use in addressing these effects in the PBAPS second license renewal environmental report. Later, NRC may also request an informal consultation with your office under Section 7 of the ESA (16 USC 1536(a)).

Activities during the License Renewal Terms

PBAPS second license renewal will involve no new construction, refurbishment, ground disturbing activities, changes to operations, or changes to existing land-use conditions. Operation and maintenance activities during the terms of the renewed PBAPS licenses are only expected to occur in previously disturbed areas or existing rights-of-way (ROWs). Hence, no new adverse impacts to special status species are anticipated from second license renewal.

Project Features

PBAPS existing features that are relevant to the effects on special status species during the renewed license terms include the following:

1. The PBAPS plant site, which hosts the two generating units, is located on 620 acres of Exelon Generation-owned property located near Delta, Pennsylvania, primarily in Peach Bottom Township, York County, Pennsylvania on the west side of Conowingo Pond, which was created by the construction of the Conowingo dam on the Susquehanna River in 1928. The area within 6 miles of the site includes parts of York and Lancaster Counties in Pennsylvania and sections of Harford and Cecil Counties in Maryland.
2. PBAPS is approved by the Susquehanna River Basin Commission (SRBC) to withdraw water from the Conowingo Pond to cool the condensers in a once-through heat dissipation system. Second license renewal requires no change to this authorization. The principal components of the circulating water system are the outer intake structure, intake basins, inner intake structure, condensers, discharge basin, helper cooling towers, discharge canal, and discharge structure.
 - a. Cooling water is withdrawn at a 148-meter-long (487-foot-long) outer intake structure on the west bank of Conowingo Pond.
 - b. After passing through the outer intake structure and travelling screens, circulating water enters a system of intake basins, followed by screens, and pumps, which comprise the inner intake structure. From the inner intake structure, the circulating water is pumped through the two main condensers where steam exiting the plant's turbine generators is cooled.
 - c. Heated cooling water from both units is discharged from the condensers into a cooling water discharge pond that directs the cooling water to the helper cooling towers and/or into the 1,430 m-long (4,700 ft-long) discharge canal, which carries it back to Conowingo Pond.
3. Discharges to Conowingo Pond of heated cooling water and other wastewaters are authorized by NPDES Permit No. PA0009733. Among the discharge limitations specified in the NPDES permit are (1) a requirement to implement the PBAPS procedure for reducing the temperature of water in the discharge canal when such water reaches 110 degrees F and (2) a requirement to operate the cooling towers during specific times and conditions. Second license renewal requires no change to the NPDES Permit.
4. Existing PBAPS transmission system components that would be removed from service if the NRC did not approve second license renewal are relevant to the effects on special status species of second license renewal. Such components include the following:
 - a. Two 500-kV generator tie lines, which traverse only onsite property used for industrial purposes and serve to connect the main power transformer of each unit to its onsite substation (south substation for Unit 2 and north substation for Unit 3).
 - b. One 34.5-kV submarine cable, which supplies power to the PBAPS units for safe shutdown if all other offsite power supplies as well as power from onsite diesel generators is unavailable. This 34.5-kV submarine cable is powered from the 33 kV bus at Susquehanna Substation (adjacent to the Conowingo Dam) and is routed either underwater or underground for most of its length before connecting to the PBAPS Station Blackout substation located near Unit 1.

- c. Three sources of startup auxiliary power that connect to 13-kV startup switchgear at the station:
 - i. A 220-kV line that traverses only onsite property used for industrial purposes and connects to the plant from equipment located near the north substation.
 - ii. An onsite, underground, dedicated 13-kV line that connects to the plant from equipment located near the north substation.
 - iii. An onsite, mostly underground, dedicated 13-kV line that connects to the plant from equipment collocated with the north substation.

The enclosed Figure 1 shows the locations of the existing PBAPS project features relevant to the effects of second license renewal on special status species and the full extent of the project area for the second license renewal.

Identification of Special Status Species Resources

Using the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Tool, a web-based application sponsored by the Pennsylvania Natural Heritage Program (PNHP), Exelon Generation has reviewed the potential for the PBAPS second license renewal to adversely affect known occurrences of species or natural communities of concern. The enclosed receipt for PNDI search ID PNDI-617811 states that the project could potentially impact the species listed below:

- Lobed spleenwort (*Asplenium pinnatifidum*), current status as Special Concern Species;
- Harbinger-of-spring (*Erigenia bulbosa*), state-listed as Threatened;
- American holly (*Ilex opaca*), state-listed as Threatened; and
- An unidentified sensitive species, current status as Special Concern Species.

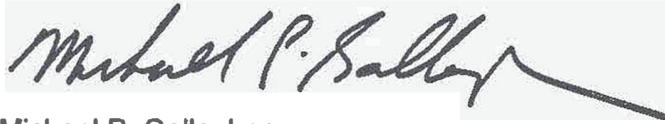
Because PBAPS second license renewal involves no new construction, refurbishment, ground disturbing activities, changes to operation, or changes to existing land-use conditions, Exelon Generation does not expect new adverse effects from the PBAPS second license renewal to special status plant species located near the PBAPS site, circulating water supply system, or transmission facilities. Nevertheless, we are requesting your help to identify issues we may have overlooked that need to be addressed in the PBAPS second license renewal environmental report. We are also interested in learning of any information your staff believes could help expedite the NRC's review of the PBAPS second license renewal application. Hence, in closing, we would appreciate receiving a response from you detailing such issues and information for the PBAPS site. We would also welcome your confirmation of our conclusion that PBAPS second license renewal would not adversely affect special status plant species.

Because we plan to incorporate a copy of your response, as well as this letter, into the PBAPS second license renewal environmental report that will be submitted to the NRC as part of the PBAPS second license renewal application, your response will be most helpful if we receive it by November 10, 2017.

September 26, 2017
Bowen – 4

Please call Nancy Ranek (610-765-5369) of my staff if there are questions or you require additional information.

Sincerely,

A handwritten signature in black ink, reading "Michael P. Gallagher", is displayed on a light gray rectangular background. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Michael P. Gallagher

Enclosures:

1. Figure 1 Site Boundary
2. Receipt for PNDI Search ID PNDI-617811

September 26, 2017
Bowen – Enclosure 1

ENCLOSURE 1

Figure 1 Site Boundary



Legend

- ★ PBAPS Center Point
- Overhead Transmission Line
- - - Underground Transmission Line
- Site Boundary

Note:
 1) Transmission lines are approximate and are only shown within the project area.
 2) Transmission line codes correspond to project features 4, in the attached letter.

Reference:
 Transmission Line source: Stone & Webster and Exelon 2015 UFSAR

NAD 1983 StatePlane Pennsylvania South
 Projection: Transverse Mercator
 Line Unit: Foot US

0 500 1,000 2,000
 Feet



**Figure 1
 Site Boundary**

Peach Bottom,
 Peach Bottom, PA

Job
Prepared by TFB
Checked by
Date 9/18/2017

September 26, 2017
Bowen – Enclosure 2

ENCLOSURE 2

Receipt for PNDI Search ID PNDI-617811

1. PROJECT INFORMATION

Project Name: **PBAPS_DraftER2016**

Date of Review: **9/21/2017 02:26:19 PM**

Project Category: **Energy Storage, Production, and Transfer, Energy Production (generation), Other**

Project Area: **774.51 acres**

County(s): **Lancaster; York**

Township/Municipality(s): **DRUMORE; FULTON; PEACH BOTTOM**

ZIP Code: **17314**

Quadrangle Name(s): **DELTA; HOLTWOOD**

Watersheds HUC 8: **Lower Susquehanna**

Watersheds HUC 12: **Fishing Creek-Susquehanna River**

Decimal Degrees: **39.756246, -76.270233**

Degrees Minutes Seconds: **39° 45' 22.4849" N, 76° 16' 12.8400" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	Potential Impact	MORE INFORMATION REQUIRED, See Agency Response

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

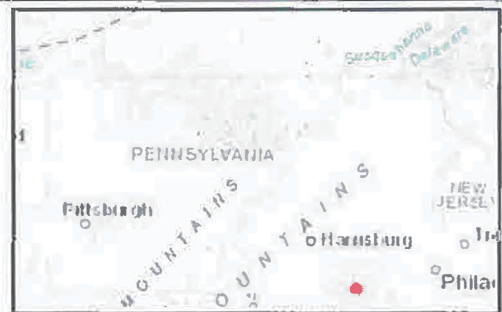
Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

PBAPS_DraftER2016

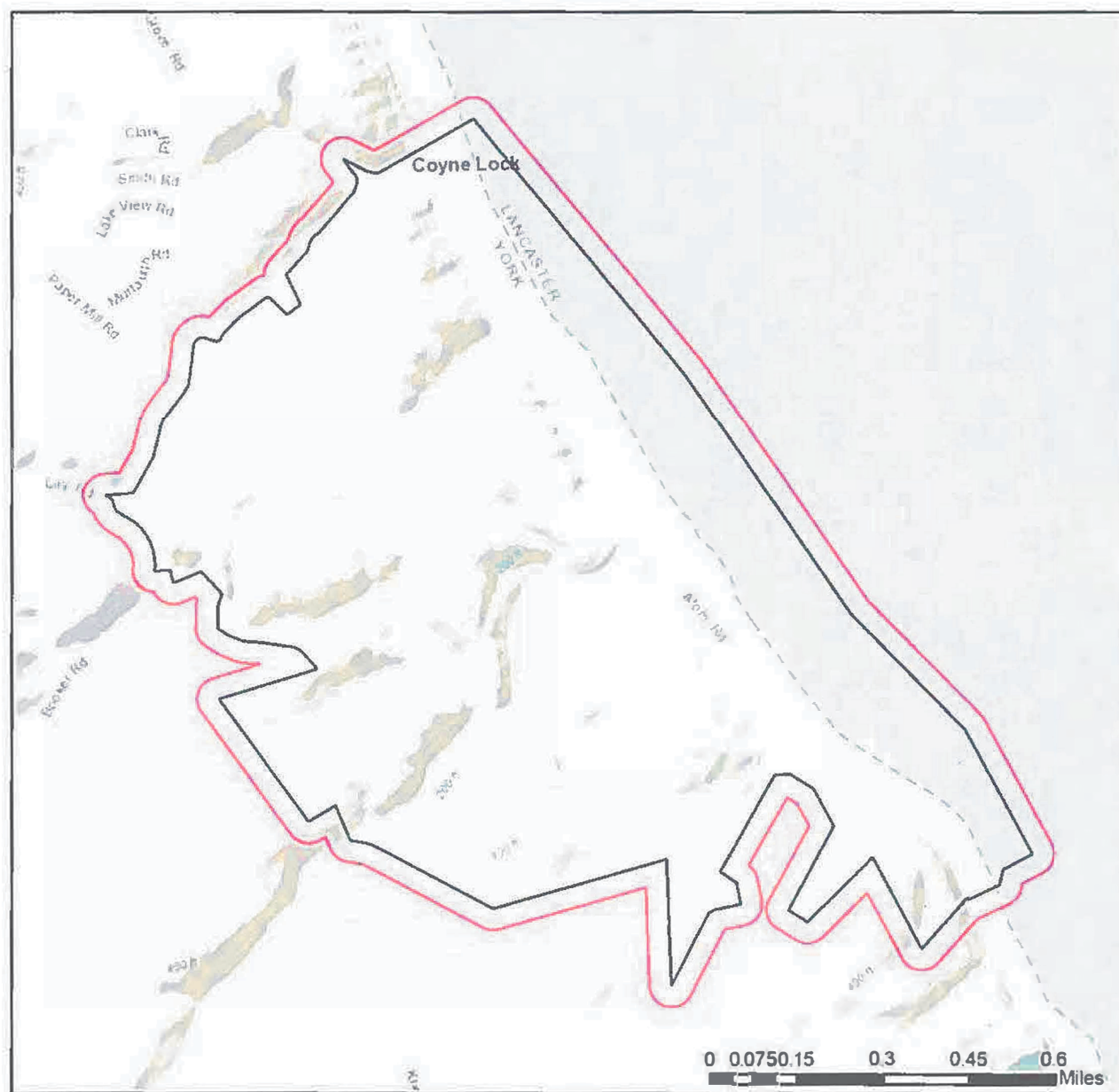


- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

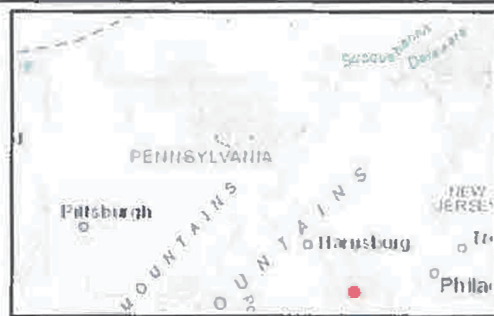


PBAPS_DraftER2016



- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESPONSE TO QUESTION(S) ASKED

Q1: Which of the following closest describes the proposed project?

Your answer is: A well or other groundwater extraction (e.g., groundwater pumping to facilitate mining, pump-and-treat operation) is proposed as part of this project, or in order to support some aspect of the project, but less than 1000 gallons per day will be extracted.

Q2: Are there any perennial or intermittent waterways (rivers, streams, creeks, tributaries) in or near the project area, or on the land parcel?

Your answer is: Yes

Q3: Describe how wastewater (effluent) will be handled (select one). For the purpose of this question, wastewater/effluent does not include stormwater runoff. If the project involves solely the renewal or modification of an existing discharge permit (e.g., NPDES permit), select from options 3, 4, 5, or 6 below.

Your answer is: Some or all wastewater/effluent from this project/activity will be discharged to a waterway (river or stream), and the discharge (including the existing discharge, plus any additional discharge) will exceed 5000 gallons/day.

Q4: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected – either directly or indirectly – by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: The project area (or land parcel) has not been investigated by someone qualified to identify and delineate wetlands, or it is currently unknown if the project or project activities will affect wetlands.

Q5: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q6: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:

<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Asplenium pinnatifidum	Lobed Spleenwort	Special Concern Species*	Special Concern Species*	Year-round (evergreen)
Erigenia bulbosa	Harbinger-of-spring	Threatened	Special Concern Species*	Flowers March - April
Ilex opaca	American Holly	Threatened	Threatened	Flowers May - early June, fruits October - winter; evergreen leaves
Sensitive Species**		Special Concern Species*	Threatened	

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Percina bimaculata	Chesapeake Logperch	Threatened

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2006). Evaluate all wetlands within 300 feet of the project area, which includes all areas that will be impacted by earth disturbance or project features (e.g., roads, structures, utility lines, lawns, detention basins, staging areas, etc.). IF THE PHASE 1 SURVEY IS DONE BY A QUALIFIED BOG TURTLE SURVEYOR (see <https://www.fws.gov/northeast/pafo/endangered/surveys.html>): 1) Send positive results to USFWS for concurrence, along with a project description documenting how impacts will be avoided. OR, conduct a Phase 2 survey and send Phase 1 and 2 results to USFWS for concurrence. 2) Send a courtesy copy of negative results to USFWS (label as "Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy"). USFWS approval of negative results is not necessary when a qualified surveyor does the survey in full accordance with USFWS guidelines. IF THE PHASE 1 SURVEY IS NOT DONE BY A QUALIFIED SURVEYOR: Send ALL Phase 1 results to USFWS for concurrence, and if potential habitat is found, also send a project description documenting how impacts will be avoided. As a qualified bog turtle surveyor, I _____ (name) certify that I conducted a Phase 1 survey of all wetlands in and within 300 feet of the project area on _____ (date) and determined that bog turtle habitat is absent.

_____ (Signature)

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

***Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:

____ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

____ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

____ SIGNED copy of a Final Project Environmental Review Receipt

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

____ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

____ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Emily Phelan
Company/Business Name: AECOM
Address: 625 W. Ridge Pike, Suite E-100
City, State, Zip: Conshohocken, PA 19428
Phone: (610)832-3651 Fax: (610)832-3501
Email: emily.phelan@aecom.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Phelan,
Emily
applicant/project proponent signature

Digitally signed by
Phelan, Emily
Date: 2017.09.21
15:00:36 -04'00'

9/21/2017
date

September 27, 2017

PNDI Number: 617811

Emily Phelan

AECOM

625 West Ridge Pike, Suite E-100

Conshohocken, PA 19428

Email: emily.phelan@aecom.com (hard copy will not follow)

Re: PBAPS_DraftER2016

Drumore, Fulton and Peach Bottom Townships, Lancaster and York Counties, PA

Dear Emily Phelan,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **617811** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

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 Jaci Braund, Ecological Information Specialist, by phone (717-214-3813) or via email (c-jbraund@pa.gov).

Sincerely



Greg Podnieszinski, Section Chief
Natural Heritage Section