



# US FISH AND WILDLIFE SERVICE – LISTED SPECIES BIOLOGY, CONSULTATION, AND CONSERVATION IN PA

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# OUTLINE

Federal Laws pertaining to USFWS  
Jurisdictional Species

Federally listed species in PA

Consultation – PNDI, Avoidance Measures,  
Information Requests, Potential Conflicts

Conclusion and Questions

# FEDERAL LAWS AND USFWS JURISDICTIONAL SPECIES

## Endangered Species Act

- The Endangered Species Act of 1973 provides a framework to conserve and protect endangered and threatened species and their habitats both domestically and abroad.

## Bald and Golden Eagle Protection Act

- Prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs.
- The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."
- Regulations further define "disturb" as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" ([50 CFR 22.6](#)).

## Migratory Bird Treaty Act

- prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior [authorization](#) by the Department of Interior U.S. Fish and Wildlife Service.

# ENDANGERED SPECIES ACT OF 1973



Gives joint authority to the Fish and Wildlife Service and National Marine Fisheries Service



Allows protection for all species—and the habitats on which they depend





## PURPOSE OF THE ESA

to **protect** and **recover** imperiled species and the ecosystems upon which they depend.

Illegal to “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.”

# KEY DEFINITIONS

- **Endangered** - Any species in danger of extinction throughout all or a significant portion of its range.
- **Threatened** - Any species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
- **Harm** - "...significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including **breeding, feeding or sheltering.**"
- **Harass** – "...an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly impair normal behavioral patterns including **breeding, feeding or sheltering.**"

Illegal to "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct."



## DESIGNATED CRITICAL HABITAT

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Specific areas that are essential to a species conservation

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Critical habitat is a tool that supports the continued conservation of imperiled species

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Not all species have designated critical habitat

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Critical habitat designations do not affect activities by private landowners

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Federal agencies are prohibited from destroying or adversely modifying designated critical habitat.

# JURISDICTIONAL AGENCIES

USFWS

All federally listed species – plants, birds, mammals, herps, invertebrates



PAFBC

State listed reptiles, amphibians, fish, aquatic invertebrates



PGC

State listed birds and mammals



DCNR

State listed plants, terrestrial invertebrates and rare habitats



# CONSULTATION

Enter Project into PNDI

Follow Directions for each Jurisdictional Agency

Coordinate with agencies to avoid impacts

If impacts cannot be avoided, formal consultation between USFWS and the applicant/federal agency may take place

# PA CONSERVATION EXPLORER (PNDI)

conservationexplorer.dcnr.pa.gov

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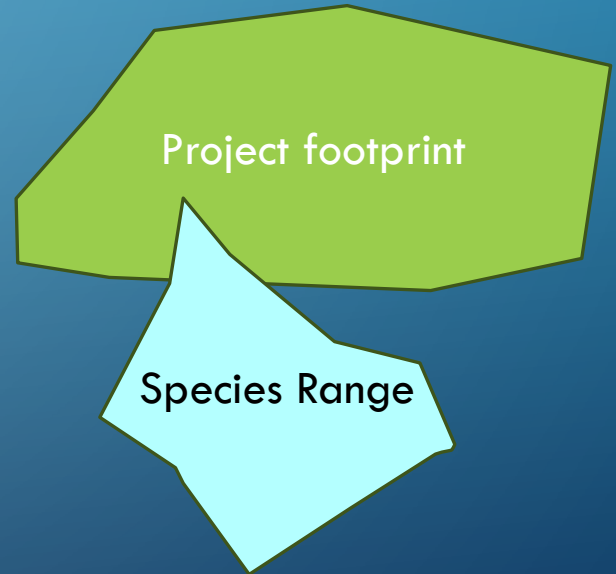
PNHP Pennsylvania Natural Heritage Program

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## Pennsylvania Conservation Explorer

Conservation Planning and PNDI Environmental Review

Welcome to **Pennsylvania Conservation Explorer**—a one stop shop for conservation planning and PNDI environmental review. The Explorer provides conservation information on biological diversity, protected lands, streams and other natural resources for







# CONSULTATIONS - INTERAGENCY COOPERATION SECTION 7

**Section 7 covers actions – Authorized, Funded or Carried Out by a Federal Agency (e.g., US Army Corps of Engineers)**

**Requires Federal Agencies to**

- 1) Use their authorities to further the purposes of the ESA by carrying out conservation programs to benefit endangered and threatened species.
- 2) Ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat.

- If agency action may affect a listed species or critical habitat, the agency must initiate consultation with FWS.

- Section 7 may affect private individuals when their action involves Federal authorization or funding.

# SECTION 10 – NON-FEDERAL PROJECTS

The FWS issues incidental take permits to private landowners under section 10(a)(1)(B) provided an approved Habitat Conservation Plan is developed.

Habitat Conservation Plans are a tool for conserving listed, proposed, and candidate species while providing for development that will not “*appreciably reduce the likelihood of the survival and recovery of the species in the wild.*”

# FEDERALLY LISTED SPECIES IN PA

- Reptiles – Bog Turtle, Eastern Massasauga Rattlesnake
- Mammals – Indiana bat, Northern Long-eared bat, Tricolored bat (Proposed Species)
- Birds – *Piping Plover*, Rufa Red Knot (during migration only), Black Rail (vagrant only)
- Invertebrates – freshwater mussels – clubshell, dwarf wedgemussel, *longsolid*, northern riffleshell, *rabbitsfoot*, rayed bean, *round hickorynut*, *sheepnose*, *salamander mussel* (Proposed Species), *Green Floater* (Proposed Species), rusty-patched bumblebee (possibly extirpated), Monarch butterfly (Candidate Species)
- Plants – Small Whorled Pagonia, Northeastern Bulrush (Proposed to delist)
- Fish – Atlantic Sturgeon, Shortnose Sturgeon == National Marine Fisheries Jurisdiction

*Italicized species have Critical Habitat within PA (or proposed)*



Great Lakes Piping Plover - USFWS



Small-whorled Pagonia



Smithsonian  
Insider:<https://insider.si.edu/2011/05/the-small-whorled-pogonia/>

- Small populations in Chester, Centre, and Venango Counties
- unlikely to intersect with this species

# FEDERALLY LISTED PLANTS

Avoidance Measures for bulrush include avoiding impacts to wetlands, providing buffers


Small-whorled pagonia is upland species, relatively easy to avoid in PA

Northeastern bulrush



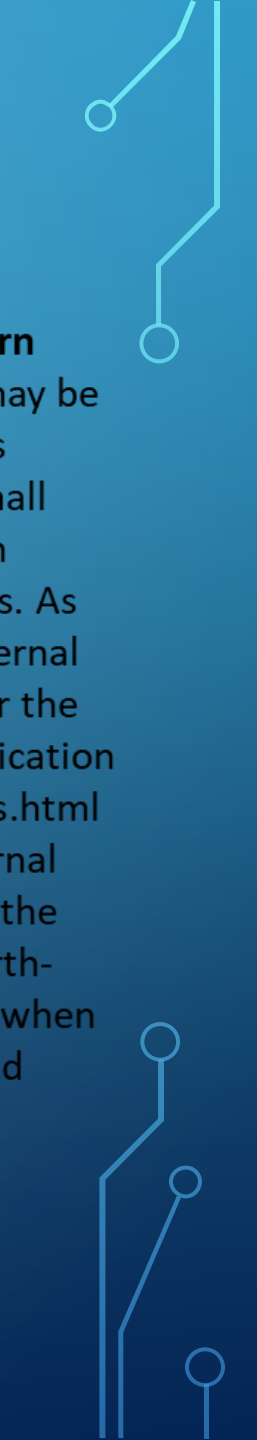
Steve Young, NY Natural Heritage Program

- Range is statewide
- Proposed for delisting
- Final decision 2024



## INFORMATION REQUEST – NORTHEASTERN BULRUSH

Information Requested: This project is located in the range of the **northeastern bulrush (*Scirpus ancistrochaetus*)**, a federally listed, endangered plant that may be adversely affected by activities that occur in or near its habitat. This species is typically found in ponds, wet depressions, shallow sinkholes, vernal pools, small emergent wetlands, or beaver-influenced wetlands. These wetlands are often located in forested areas and characterized by seasonally variable water levels. As project activities are proposed to occur in or within 300 feet of wetlands or vernal pools (or on a land parcel with wetlands or vernal pools), conduct a survey for the northeastern bulrush. A qualified botanist with field experience in the identification of this species (see <https://www.fws.gov/northeast/pafo/endangered/surveys.html>) should conduct a thorough survey of all potentially suitable wetland and vernal pool habitat in and within 300 feet of the proposed project area to determine the presence of the northeastern bulrush before any permits are approved or earth-moving activities begin. Conduct surveys between June 1 and September 30, when the flowering/fruiting culm is present. Submit the survey report to the Fish and Wildlife Service for review and comment.







# GREAT LAKES PIPING PLOVER

Range — Presque Isle State Park in Erie County





# PIPING PLOVER BIOLOGY AND AVOIDANCE MEASURES

- Migratory species – leaves during fall and winter
- Active in PA April 1 – August 31 (sometimes later)
- Nest sites are remote and unlikely to intersect with projects

*Kim Smith*

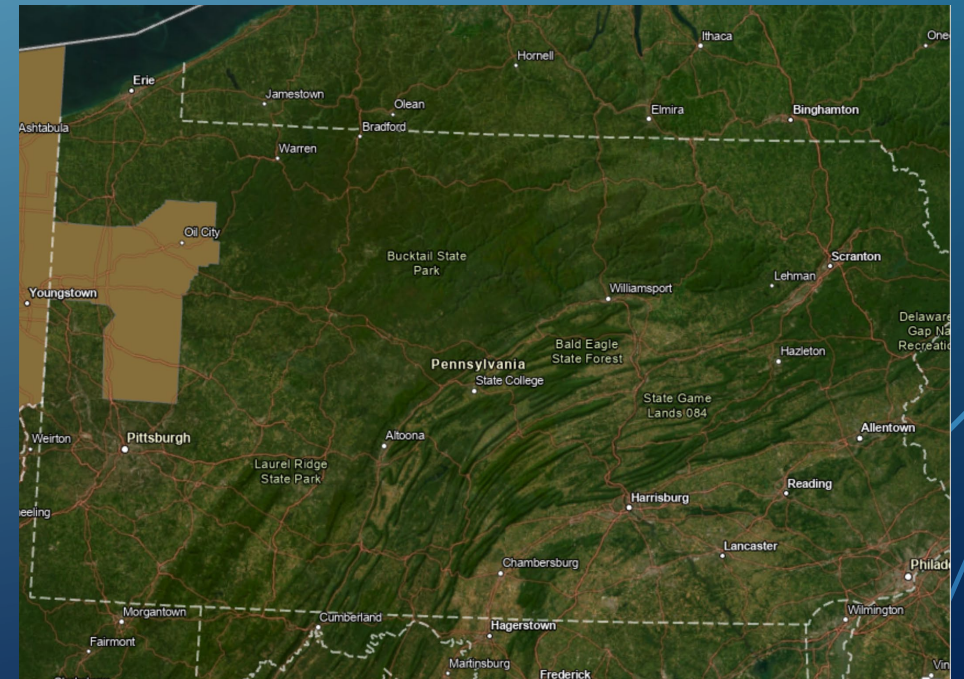


# EASTERN MASSASAUGA RATTLESNAKE

- **Active Season April – October**
- **Hibernate in crayfish borrows**
- **Move into uplands in active season**
- **Mostly in prairie-type habitats in active season**
- **Work near known populations – avoid active season and/or use qualified EMR biologist onsite**



<https://mnfi.anr.msu.edu/species/eastern-massasauga-rattlesnake>





Nathan Rathbun/USFWS

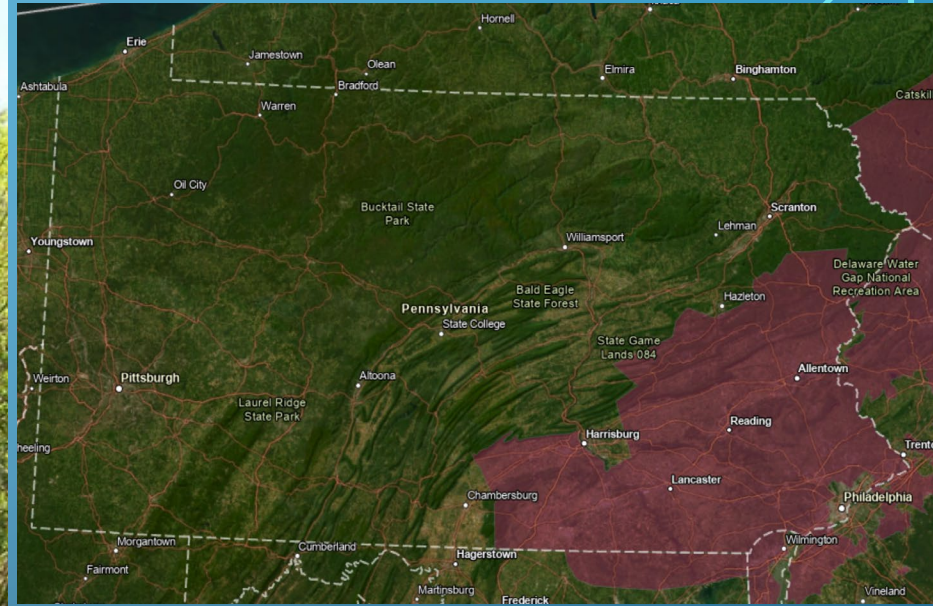
# EASTERN MASSASAUGA RATTLESNAKE

- Habitat survey may be necessary
- Potential avoidance measures – work during hibernation (Nov 1 – March 31)
- If work during active season – could use qualified EMR surveyor to check area before work starts, then put silt fencing around work area to prevent snakes moving in
- Qualified surveyor stays onsite until work is complete



# BOG TURTLE

- Found in wetlands with deep muck, open, sparse vegetation suitable for nesting, hibernation and basking
- Active Season April through October 31
- 300 foot upland buffers around wetlands
- Phase 1 Bog Turtle Survey – common information request





# INFORMATION REQUEST – BOG TURTLE PHASE 1 SURVEY

Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2020). 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 [Pennsylvania Qualified Surveyors | FWS.gov](https://www.fws.gov/pennsylvania/qualified-surveyors)): 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)

## RESPONSE TO QUESTION(S) ASKED

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

**Your answer is:** No groundwater extraction (e.g., water supply well, well for irrigation, groundwater pumping to facilitate mining, pump-and-treat operation) is proposed in order to implement or support this project.

**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:** Unknown

**Q3:** 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.

## WETLAND QUESTION...

- If you have a wetland delineation completed after answering this question and there are No Wetlands – you should go back to PNDI and update your response



- 1. Follow directions for Phase 1 Survey**
- 2. If survey done by qualified surveyor, and no habitat is located – surveyor can sign off on it without sending it in**
- 3. Positive survey – Send results to USFWS**
- 4. Avoidance Measures to consider**
- 5. Phase 2 surveys are possible**



## **BOG TURTLE CONFLICTS**



USFWS



USFWS





# AVOIDANCE MEASURES

- **Keep disturbance 300 feet from wetland edge**
- **Ensure disturbance is not affecting wetland hydrology**
- **If working within 300 feet of wetland – work during hibernation Nov 1 – March 31 (if no hibernacula are present near project)**
- **If need to work during active period – conservation measures are possible including the use of a qualified bog turtle surveyor**



# BOG TURTLE AVOIDANCE MEASURES

- No activity within 300 feet of wetlands
- No Activity within 50 feet of rivers/streams

## U.S. Fish and Wildlife Service

### RESPONSE:

Avoidance Measure: Do not conduct this project/activity within 300 feet of any wetlands or vernal pools.

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:

\_\_\_\_\_ (Signature)

Avoidance Measure: Do not conduct this project/activity within 50 feet of any streams, rivers, creeks, or tributaries. This includes both perennial and intermittent waterways.

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:

\_\_\_\_\_ (Signature)

**SPECIAL NOTE: If you agree to implement the above Avoidance Measure and if applicable, any Information Requests, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).

\* 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

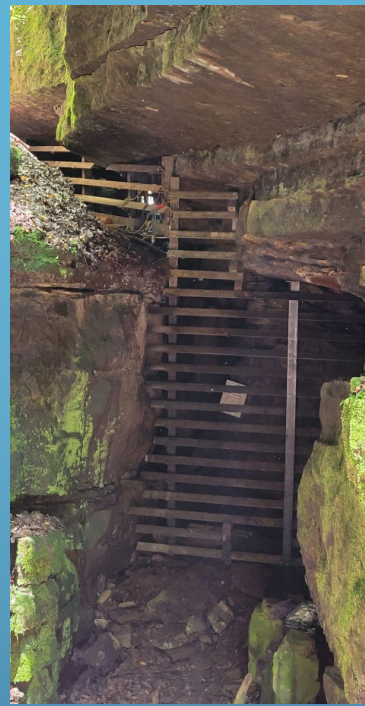
If project information was requested by one or more of the agencies above, upload\* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).

\*If information was requested by USFWS, applicants must email, or mail, project information to [IR1\\_ESPenn@fws.gov](mailto:IR1_ESPenn@fws.gov) to initiate a review. USFWS will not accept uploaded project materials.



# INDIANA BAT

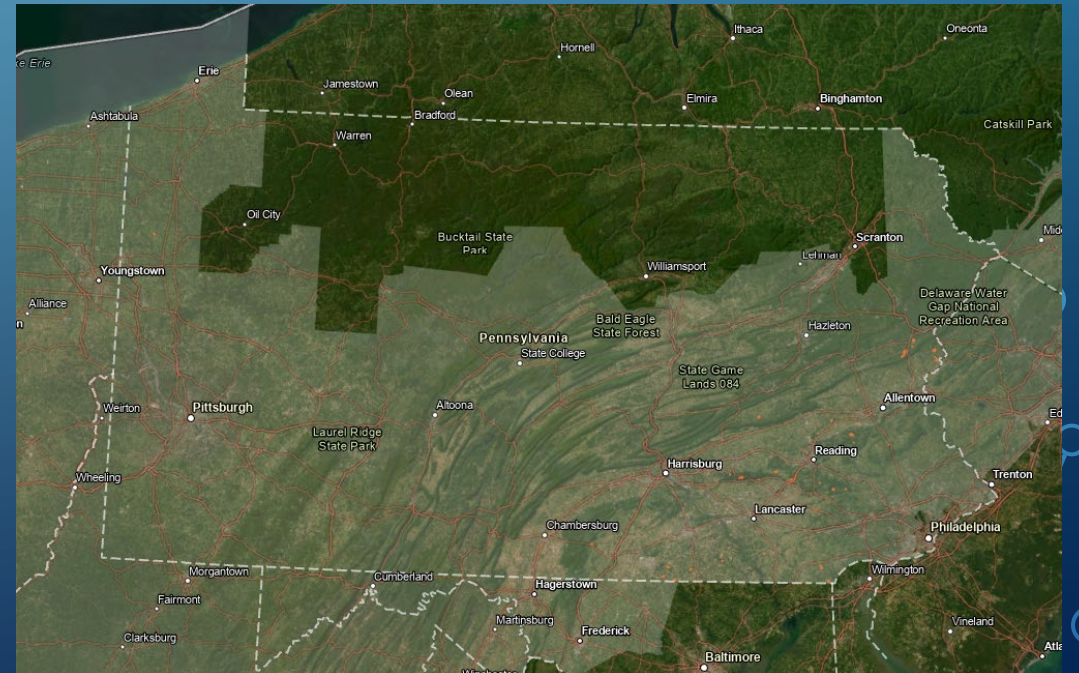
- Indiana bat range – statewide except northern tier counties
- Active April through mid-November
- Hibernate in caves, mines, tunnels
- Roost in trees, structures in active season



Kristin Bobo

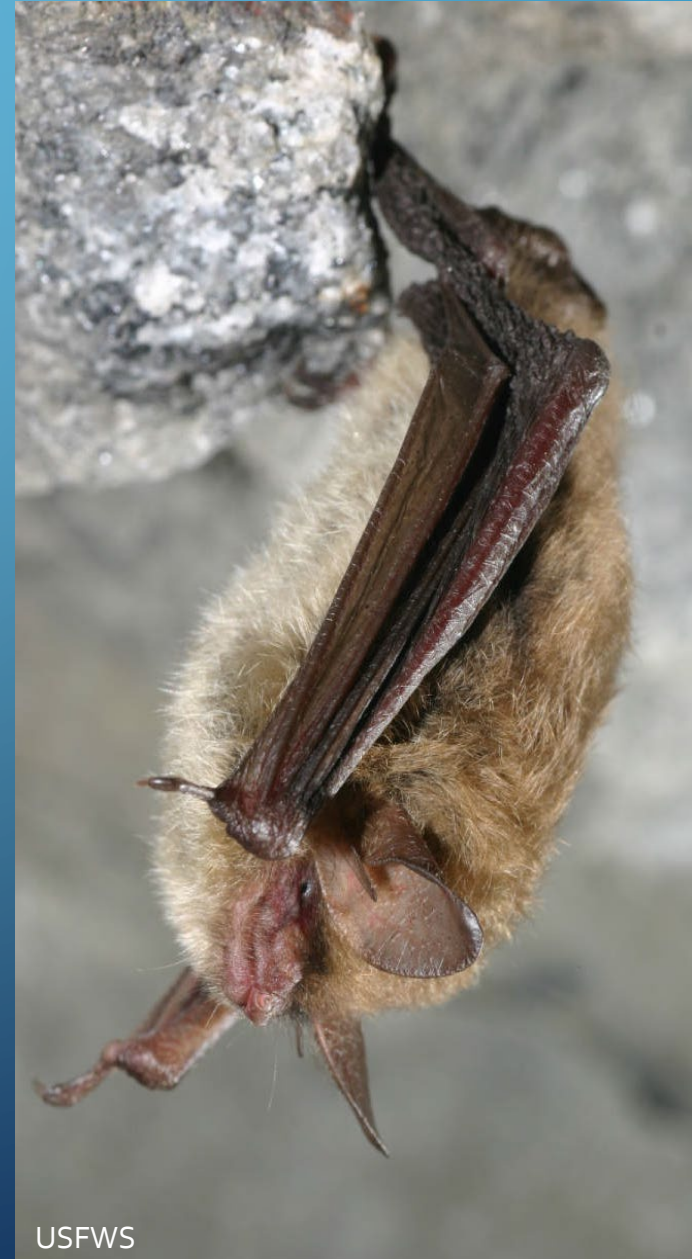


Ann Froschauer/USFWS



# NORTHERN LONG-EARED BAT

- Range is statewide
- Reclassified as Endangered in 2022, take prohibitions became effective on March 31, 2023
- PNDI receipts had to be updated, and many projects were directed to our IPAC determination keys for review
- Interim Consultation Framework – April 2023-March 31, 2024
- Stay tuned for updated guidance for this species



USFWS



# NORTHERN LONG-EARED BAT MATERNITY/PUP SEASON

- No Tree removal May 15 – August 15

Avoidance Measure: The proposed project is located in the vicinity of northern long-eared bat spring staging/fall swarming habitat. To ensure take is not reasonably certain to occur, do not conduct tree removal from May 15 to August 15. The U.S. Fish and Wildlife Service determined take is not reasonably certain to occur from tree removal if activities are avoided during the pup season (i.e., the range of time when females are close to giving birth (i.e., two weeks prior to birth) and have non-volant (i.e., unable to fly) young). For more information, see the Interim Voluntary Guidance for the Northern Long-Eared Bat: Forest Habitat Modification, available here: <https://www.fws.gov/library/collections/interim-habitat-modification-guidance>.

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:  
\_\_\_\_\_ (Signature)

**SPECIAL NOTE: If you agree to implement the above Avoidance Measure and if applicable, any Information Requests, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).



# INFORMATION REQUEST AND AVOIDANCE MEASURE FOR BOTH BATS

## U.S. Fish and Wildlife Service

### RESPONSE:

Information Request: The proposed project is located in the vicinity of northern long-eared bat spring staging/fall swarming habitat. Enter project information, including the Pennsylvania Natural Diversity Inventory receipt number, into the U.S. Fish and Wildlife Service's Information for Planning and Consultation tool (IPaC) (<https://ecos.fws.gov/ipac/>). Follow the Northern Long-eared Bat Rangelwide Determination Key step-by-step process to review this projects's potential effect on northern long-eared bats.

Avoidance Measure: Conduct any tree cutting, disturbance, inundation (flooding) and prescribed burning from October 1 to March 31.

As the project proponent or applicant, I certify that I will implement the above Avoidance Measure:

\_\_\_\_\_ (Signature)

Project is within Indiana bat summer/maternity habitat

**SPECIAL NOTE: If you agree to implement the above Avoidance Measure and if applicable, any Information Requests, no further coordination with this agency regarding threatened and endangered species and/or special concern species and resources is required.** If you are not able to comply with the Avoidance Measures, you are required to coordinate with this agency - please send project information to this agency for review (see "What to Send" section).

# TRICOLORED BAT – PROPOSED SPECIES

- 9/13/2022 – USFWS proposed to list as endangered
- Final Determination is in the works
- Overwinters in caves, mines, and even culverts.
- Uses forested habitat and talus slopes in the active season and roosts in leaf clusters.
- Range is statewide



Pete Pattavina,  
USFWS



# FEDERALLY LISTED BAT AVOIDANCE MEASURES

- Best to remove trees during hibernation to avoid impacts
- Swarming habitat – Not Active Nov 15 – March 31
- Summer/Maternity habitat Not Active October 1 – March 31
- Work adjacent to hibernacula may be best during active season (April 1 – November 14) when bats are not inside hibernacula
  - Ensure no impacts from earth disturbance



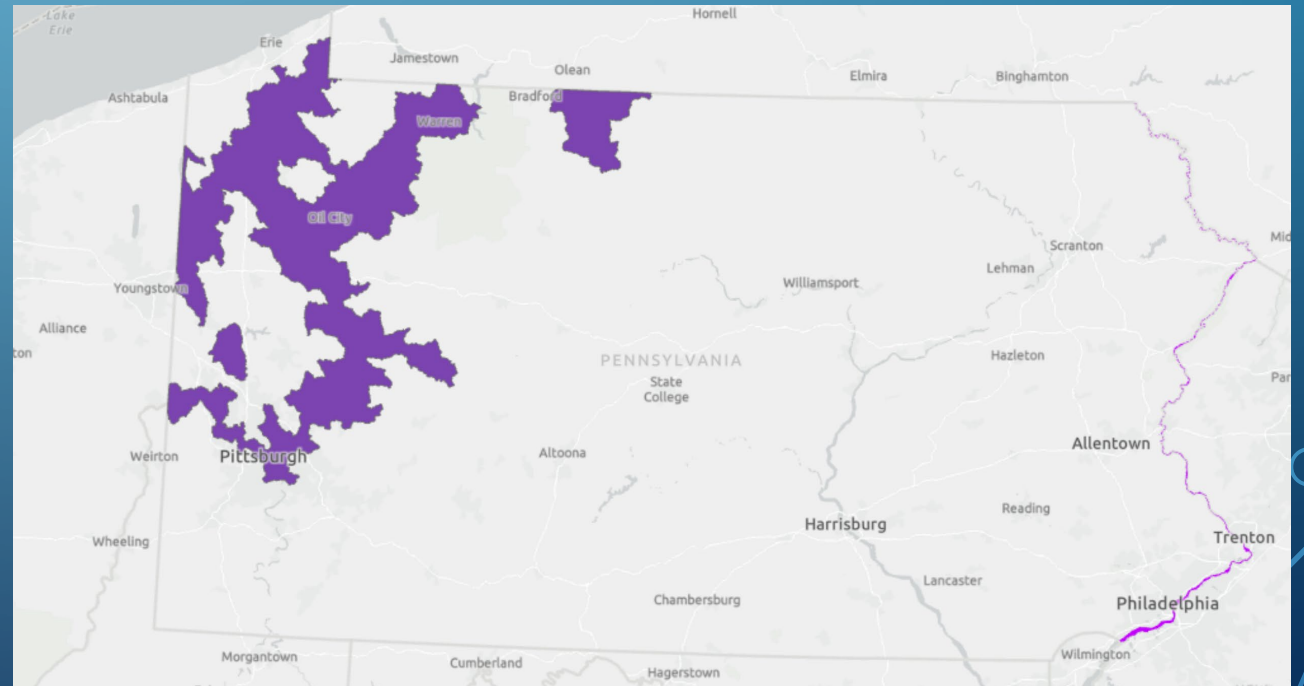


# FRESHWATER MUSSELS

- 1 species in Delaware River (Dwarf Wedgemussel)
- 8 species in Ohio River Watershed – Allegheny River, French Creek, Oil Creek
- 1 Proposed Species (Green Floater) in Susquehanna River Watershed

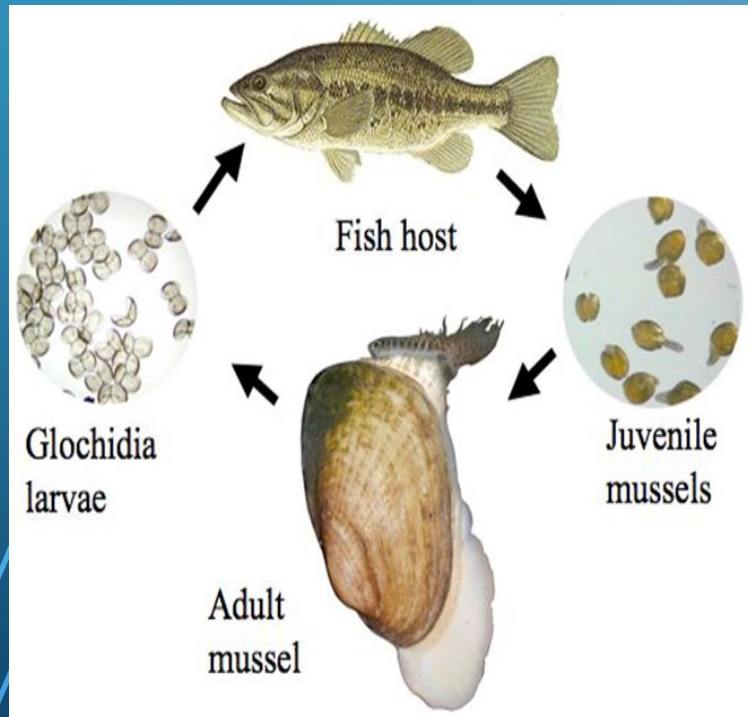


Snuffbox Mussel



# FRESHWATER MUSSEL BIOLOGY

- Filter Feeders
- Reproduction dependent on host fish





# REPRODUCTIVE STRATEGY



From the *Unio* Gallery



## Host capture by snuffbox mussel

*Epioblasma triquetra*

M. C. Barnhart 2005





# SINGLE RESIDENCE SEWAGE TREATMENT PLANTS

Following models have been pre-approved:

- 1) Norweco Model 960 aerobic unit model;
- 2) Norweco Singlair TNT system model series; and
- 3) Ecoflo Coco Filter EC7 model series.

Using the potential maximum concentration, we determined that the total ammonia nitrogen concentration should be below the site-specific (based on pH and temperature) chronic toxicity criterion to protect mussels in proximity (i.e., within 1 inch) of the discharge pipe.

**Additional models that you would like reviewed for pre-approval?**

If so - Email me: [nicole\\_ranalli@fws.gov](mailto:nicole_ranalli@fws.gov)





# SEWER LINE INSTALLATION METHODS AND THINGS TO CONSIDER

- **Open Cut** - coffer dams, pumps, turbidity curtains, installation during seasonally low flow periods
  - Not recommended in known mussel streams
  - If within tributary to known mussel stream – strict BMPs necessary
- **Horizontal Directional Drill (HDD)** – spans long distances (3000'-6000') often deeper and done using a slurry consisting of water and bentonite powder.
  - We have supported this method to avoid instream work
  - Request Geotechnical analysis/report on potential for Inadvertent Return
  - In known mussel streams – request qualified mussel surveyor be onsite for work near sensitive streams, and only experienced drillers are used
  - Request IR Contingency plan







# INADVERTENT RETURN

- Unintended transfer of drilling mud to the surface during one of the HDD stages
- Typically occurs through natural fractures or fissures
- Inert material, but can suffocate mussels, affect host fish and impact wetland quality





## IR CONTAINMENT AND CLEAN-UP

- Containing the IR as quickly as possible is key to minimizing impacts
- Containment and cleanup can sometimes be more damaging to the resource than the IR itself





Alexa Maine of the Confederated Tribes of the Umatilla Indian Reservation snorkeling during a survey of mussel populations in the John Day River

# PROJECTS NEAR OR AFFECTING BODIES OF WATER

- Instream work necessary?
- New outlet into waterbody?
- E&S Plan for the project-silt fence, turbidity curtain, spill avoidance plan
- Work During Low Flow/No Flow
- Habitat assessment, mussel surveys – coordinate with USFWS and PA Fish and Boat



# INFORMATION REQUEST – BALD EAGLE

Information Request: Due to the proximity of this project to a **bald eagle nest**, it is possible that project activities may disturb bald eagles, which is a form of "take" under the Bald and Golden Eagle Protection Act and may require a permit. The Service has prepared a project screening form to help you determine which specific measures may be necessary to avoid disturbing bald eagles and their nests, based on the type and scope of your proposed project or activity, and its distance from a bald eagle nest. Complete the "Bald Eagle Project Screening Form" (see [https://www.fws.gov/northeast/pafo/pdf/Bald\\_Eagle\\_Project\\_Screening\\_Form\\_102716.pdf](https://www.fws.gov/northeast/pafo/pdf/Bald_Eagle_Project_Screening_Form_102716.pdf)) and implement the measures identified on that form. Submit a copy of the completed Screening Form to the appropriate federal or state permitting agencies (e.g., PA DEP).

- **Self-certification** – no need to send to our office



Bill Buchanan/USFWS

## WHAT TO SEND TO JURISDICTIONAL AGENCIES

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### **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.

## Also Include:

- IS THERE TREE REMOVAL (AMOUNT)
- WHAT IS YOUR PROJECT TIMELINE
- ARE THERE WETLANDS ONSITE
- PREVIOUS STUDIES – SURVEYS, WETLAND DELINEATIONS
- IS THIS A RE-SUBMITTAL = USFWS PROJECT NUMBER



Species	Active Season	Range	Common Questions	Common Avoidance Measures
Bog Turtle	April through October 31	Southeastern PA	1) Are there wetlands within 300 feet 2) Is habitat suitable = Phase 1 survey	Keep 300 feet from wetlands  Work during hibernation
Eastern Massasauga Rattlesnake	April through October 31	Butler, Venango Counties	1) Are there wetlands within 300 feet 2) Is habitat suitable	Avoid active season work near suitable habitat
Indiana bat	April – Oct 1 = maternity habitat April – Nov 15 = swarming habitat	Most of the state except northern tier counties	1) Is there tree removal 2) Is there blasting/digging (if near a hibernaculum)	Tree removal during inactive period  Blasting guidelines if near hibernaculum
Northern long-eared bat (May change after April 2024)	Similar dates as above – Also maternity/pup season May 15 – August 15	Statewide	1) Is there tree removal 2) Is there blasting/digging (if near a hibernaculum)	Tree removal during inactive period  Blasting guidelines if near hibernaculum
Freshwater Mussels	Mussels are sessile species that are present year round	Ohio River Watershed, Delaware River Watershed	1) Is there instream work 2) Is there an outfall proposed 3) E&S Plan/BMPs to prevent sedimentation 4) Geotechnical Report (HDD)	Equipment will not enter the stream  Single Residence Sewer Treatment Plant model will adequately minimize Chloride and Ammonia

# Links

- **PA Natural Heritage Program:** <https://conservationexplorer.dcnr.pa.gov/>
- **Tricolored bat** - <https://www.fws.gov/press-release/2022-09/proposal-list-tricolored-bat-endangered>
- **Salamander mussel** - <https://www.federalregister.gov/documents/2023/08/22/2023-17668/endangered-and-threatened-wildlife-and-plants-endangered-species-status-for-salamander-mussel-and>
- **Green floater** - <https://www.federalregister.gov/documents/2023/07/26/2023-15143/endangered-and-threatened-wildlife-and-plants-threatened-species-status-with-section-4d-rule-for>
- **Northern long-eared bat information** - <https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>
- **Monarch Butterfly** - <https://www.federalregister.gov/documents/2023/06/27/2023-13577/endangered-and-threatened-wildlife-and-plants-review-of-species-that-are-candidates-for-listing-as>
- **IPAC** - <https://ipac.ecosphere.fws.gov/>
- **Bald Eagle Links**
  - Guidelines: <https://www.fws.gov/media/national-bald-eagle-management-guidelines>
  - Screening Form: <https://www.fws.gov/media/northeast-bald-eagle-project-screening-form>
  - Screening Tool: <https://fws.maps.arcgis.com/apps/webappviewer/index.html?id=87ac96536654495b9f4041d81f75d7a0>