

# PENNSYLVANIA BIOLOGICAL SURVEY HANDBOOK

## CHAPTER 4. AGENCY ROLES AND PROCESSES FOR ENDANGERED AND THREATENED SPECIES CONSERVATION IN PENNSYLVANIA

(revised 14 July 2022)

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### INTRODUCTION

To elucidate the process through which natural resource agencies (Table 1) can protect biological resources, the Pennsylvania Biological Survey (PABS) provided each Pennsylvania state agency with a list of the following topics of interest and discussion prompts to consider as they apply to each agency:

Statement of the role of the agency. Agency taxonomic authority is identified in Chapter 3 and can be a significant part of the explanation of the agency role. Chapter 4 extends this explanation by covering how the agencies are involved in project review, state land management, and interagency coordination as driven by law, regulation, and non-regulatory opportunities.

Listing/delisting criteria. What are the listing and delisting criteria for ranking Rare or Near Threatened, Threatened, Endangered, or other statuses?

Updating lists. How often are the lists updated and what triggers a species' status to be reviewed?

This chapter may be cited as:

Pennsylvania Biological Survey. 2022. Chapter 4: Agency Roles and Processes for Endangered and Threatened Species Conservation in Pennsylvania. E. Crisfield, R. Latham editors. *PABS Handbook* ([pabiologicalsurvey.org/pabs-handbook](http://pabiologicalsurvey.org/pabs-handbook))

**Recovery plans.** Do recovery plans exist for listed species? If so, are measurable targets for delisting, downlisting, or uplisting<sup>1</sup> included? If recovery plans do not exist, what guides recovery actions for the species?

**Threatened & Endangered Actions.** Are T&E species (species classified as Endangered, Threatened, Near Threatened, Rare, or other regulatory category of conservation need) prioritized for enhanced survey and monitoring efforts or other benefits?

**Funding.** How is T&E recovery funded?

**Habitat protections.** In what ways are habitats that support T&E species designated and protected? Does this differ by land ownership or habitat type (such as wetlands)? Are any other habitats protected regardless of the presence of listed species?

**Environmental review and mitigation.** How does environmental review protect T&E species? Is this approach more effective for certain kinds of threats or projects? What kinds of surveys are required and at what phase of the projects? What are agency staff members' roles in specifying mitigation requirements, overseeing compliance with permitting conditions or agency guidance, and evaluating performance? For how long after compliance and at what intervals is performance evaluated? To what degree are consultants, academia, nonprofit organizations, or PABS technical committees involved?

The responses that follow are intended to help PABS members and other interested parties understand the processes. PABS will try to maintain this document regularly, however details provided here are subject to change and the reader is advised to contact the agency directly for up-to-date specifics.

**Table 1. Natural resource agencies and their purviews for protecting biodiversity and other natural heritage features.**

Agency	Purview
<b>Pennsylvania Department of Conservation of Natural Resources (DCNR)</b>	Plants, natural communities, geologic features
<b>Pennsylvania Game Commission (PGC)</b>	Birds, mammals
<b>Pennsylvania Fish and Boat Commission (PFBC)</b>	Reptiles, amphibians, fish, aquatic invertebrates
<b>Pennsylvania Department of Environmental Protection (PA DEP)</b>	Birds, mammals, reptiles, amphibians, invertebrates, plants, natural communities, geologic features
<b>U.S. Fish and Wildlife Service (USFWS)</b>	All federally listed species

An important note is that for federally listed species, designation of critical habitats offers additional protections beyond what is described in this document, which is focused on state protections. Critical habitat contains the specific set of conditions within the geographic area occupied by a T&E species at the time it was listed, including the physical or biological features essential to conserve the species ([U.S. FWS 2017](#)). Critical habitat designations affect only federal agency actions or federally funded or permitted activities. They do not affect activities by private landowners. Wetlands have federal protections through the Clean Water Act (§404) ([U.S. EPA 2021](#)), which regulates discharge of dredged or fill material into waters of the United States, including wetlands. Projects covered include fill for development, water resources (e.g., dams), infrastructure (e.g., highways), and mining projects.

<sup>1</sup> For definitions, see Chapter 2 of this *PABS Handbook* (page 2-9).

## DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES (DCNR)

Contact: Bureau of Forestry, Conservation Science and Ecological Resources Division, 717-787-3444, PaForester@pa.gov.

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### STATEMENT OF THE ROLE OF THE AGENCY

DCNR's mission is to *conserve and sustain Pennsylvania's natural resources for present and future generations' use and enjoyment*. Further, DCNR Bureau of Forestry's mission includes *to conserve native wild plants*. DCNR has jurisdictional authority for wild plants in Pennsylvania, provided by the [Wild Resource Conservation Act](#) (see Chapter 3 of this *PABS Handbook*). DCNR has promulgated a list of classified plants, found in Title 17, Chapter 45, [Conservation of Native Wild Plants](#).

In addition, the [Conservation and Natural Resources Act](#) (Act 18) directs DCNR to undertake and maintain a thorough and extended survey of "ecological resources the Commonwealth," identifying significant natural features and species which comprise these features and "to put the results of the survey into a form for convenient reference." DCNR satisfies this role through the Pennsylvania Natural Diversity Inventory (PNDI) online tool through which it provides coordination for T&E and non-T&E species, terrestrial invertebrates, natural communities, and geologic features through the PNDI review process.

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### LISTING/DELISTING CRITERIA

A listed species must meet the definition of the classification in which it is listed in Title 17, Chapter 45. When a species no longer meets the definition, it may be delisted or reclassified. If a non-listed species meets the definition of a classification, it may be considered for listing. Definitions for classification of native wild plants can be found at: [pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/017/chapter45/chap45toc.html](http://pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/017/chapter45/chap45toc.html).

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### UPDATING LISTS

Chapter 45 does not have a specified timeline in which it is to be updated. DCNR strives to update the classified list every 5 years or whenever necessary. The criteria for delisting or reclassifying species statuses are provided in the classification definitions in Chapter 45. The trigger to review a species to determine if it meets the definition of a classification in Chapter 45 may originate from DCNR, members of PABS's Vascular Plants Technical Committee (VPTC), or members of the public (through the Rare Plant Forum). Reviews are conducted by DCNR, VPTC, and Pennsylvania Natural Heritage Program botany staff. Final decisions for classification changes reside with the jurisdictional agency.

The process for updating the list of classified plants is a regulatory one, which entails promulgating first a proposed rulemaking and then a final rulemaking. DCNR first obtains approvals from the offices of General Counsel, Chief Counsel, Governor's Budget Office, Office of Attorney General, and Governor's Policy Office. Once approved, the proposed rulemaking is delivered to the legislative committees, the Independent Regulatory Review Commission (IRRC), and the Legislative Reference Bureau for publication of notices of proposed rulemaking in the Pennsylvania Bulletin. The public, committees, and IRRC have an opportunity to comment on the proposed rulemaking, and DCNR must respond to all comments. DCNR addresses comments before IRRC in a public hearing, then develops and publishes the final rulemaking.

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## RECOVERY PLANS

Recovery plans exist for 13 high G-rank plant species (G1, G2, or G3; see Chapter 2 of this *PABS Handbook*). Recommended conservation actions are provided in the newer recovery plans. Measurable targets exist for completing immediate, near-term, and long-term actions. DCNR's Pennsylvania Plant Conservation Network program is working to promote the writing of recovery plans for high G-ranked species and aiding in implementation of recovery actions.

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## T&E ACTIONS

T&E species are prioritized for survey and monitoring efforts through the PNDI environmental review process. Applicants for PA DEP permits are required to coordinate with agencies for T&E species while this action is only recommended for species classified by PABS technical committees as having conservation significance but not listed in the current version of Chapter 45 (i.e., "proposed" species). Voluntary conservation actions including implementation of recovery plans are being carried out by DCNR and individuals throughout Pennsylvania and being coordinated through the Pennsylvania Plant Conservation Network.

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## FUNDING

DCNR funds T&E recovery through the Bureau of Forestry's Conservation Science and Ecological Resources budget for the Wild Plant Program. Funds are set aside through a contract with the Western Pennsylvania Conservancy (WPC), DCNR's plant partner in the Pennsylvania Natural Heritage Program, to fund botanists internal or external to WPC staff to survey, research, and write recovery plans. The Wild Resource Conservation Program is the only state-level source of funding for plant conservation and research.

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## HABITAT PROTECTIONS

As the land manager, DCNR Bureau of Forestry and Bureau of State Parks are able to carry out more targeted, specific management for native wild plants than most private landowners. DCNR provides habitat protection for T&E species on 2.2 million acres of state forest lands and 300,000 acres of state parks. Title 17, Subpart B and C, Rules and Regulations for state parks and state forests, indicate that the public is not permitted to cut, pick, dig, damage or remove, in whole or in part, a living or dead tree, shrub, plant, or moss. On state forest lands, public wild plant sanctuaries and other special habitat management areas (e.g., High Conservation Value Areas, Special Management Zones, buffer zones, etc.) exist. These special management areas may be designated for significant features such as native wild plants, habitats, or special/unique natural community or forest type. There may be specific management recommendations to maintain or improve the significant feature for which a special management area was designated. Activities (e.g., rights-of-way, large-scale recreation activities, trail creation, etc.) proposed to take place on or through state forest lands must go through a State Forest Environmental Review.

On private lands, DCNR performs environmental review for T&E species through the PNDI review process, most often for when PA DEP permits are required for proposed development. This process focuses on T&E species and/or habitat presence in the area of disturbance. PNDI polygons are drawn to include core and supporting habitat for T&E species identified as occurring on or near the site. DCNR performs environmental review for natural communities, geologic features, and terrestrial invertebrates in the PNDI process and recommends voluntary conservation measures. The natural communities themselves are not legally listed as T&E, but natural communities often harbor T&E species. Natural communities include terrestrial, wetland, and aquatic habitats (see [naturalheritage.state.pa.us/Communities.aspx](http://naturalheritage.state.pa.us/Communities.aspx) and [naturalheritage.state.pa.us/aquatic.aspx](http://naturalheritage.state.pa.us/aquatic.aspx)).

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## ENVIRONMENTAL REVIEW THROUGH THE PA DEP PERMITTING PROCESS AND MITIGATION

Environmental review protects T&E species for site-specific, planned projects that require PA DEP permits. It alerts an agency (DCNR, PFBC, PGC) when potential impacts may occur to species under its purview and when mitigation is necessary. Environmental review is most effective in identifying discrete, site-specific, planned disturbances of known locations of T&E species requiring permitting. It is less effective against cumulative effects, environmental effects (pollution, spills, etc.), climate change, poaching, or other unplanned, diffuse disturbances or activities that do not require permitting.

DCNR reviews all species under its purview (including T&E plants, natural communities, terrestrial invertebrates, and geologic features) and provides comments, regardless of the project type. The comments may include communication with the applicant on: avoiding, minimizing, and mitigating impact; requesting survey; or recommending voluntary conservation measures.

Surveys may be requested when environmental reviewers anticipate the proposed development will impact a T&E species or its habitat. It is best for coordination to happen early in the project planning process, to identify potential impacts and conduct surveys with plenty of time to adjust the plan if needed.

DCNR staff members request avoidance, minimization, and mitigation through environmental review coordination. PA DEP may or may not incorporate DCNR's recommendations into a permit condition. PA DEP is responsible for overseeing permit compliance and evaluating performance.

Because DCNR's environmental review comments may or may not be included in PA DEP's permit conditions, DCNR is often not involved in compliance or performance evaluation after the environmental review is complete. DCNR and PA DEP have discussed ways of closing this loop more effectively. Clearance letters and PNDI receipts are good for 2 years.

An applicant generally hires a consultant or local academic to perform a survey for an environmental review. Non-profit organizations and PABS technical committees are generally not involved in the environmental review process, unless the reviewer is seeking an answer to a specific question, e.g., plant species identification.

For more information see the [PA DEP's PNDI Policy document](#) which includes information on the different PA DEP permits and the requirements they have for T&E species.

## PENNSYLVANIA FISH & BOAT COMMISSION (PFBC)

Contact: Division of Environmental Services, Natural Diversity Section, 814-359-5237.

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### STATEMENT OF THE ROLE OF THE AGENCY

*The Mission of the Pennsylvania Fish and Boat Commission is to protect, conserve, and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.* The PFBC has jurisdictional authority for “any plant or animal that grows or lives in or upon the water” (Pennsylvania Consolidated Statutes, [Title 30, §102](#)). Primary responsibilities support recreational fishing (e.g., stocking, management) and boating with overarching activities of resource management, outreach, education and law enforcement.

The Pennsylvania Fish and Boat Code, Title 30 of the Pennsylvania Consolidated Statutes, governs the powers and jurisdiction of the PFBC. Sections pertinent to T&E species conservation are detailed in Chapter 3 of this *PABS Handbook*.

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### LISTING/DELISTING CRITERIA

*Statutory Authority*—Amendments to Title 58 Pa, Chapter 75, [§75.1](#) and [§75.2](#) are published under the statutory authority of section 2305 of the code (relating to Threatened and Endangered species). Amendments to [§75.3](#) (relating to Candidate species) are published under the statutory authority of 2102 of the code (relating to rules and regulations). See [pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol45/45-47/2047.html](http://pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol45/45-47/2047.html).

The considerations for listing and delisting include, but are not limited to:

1. Criteria
  - A.1 Population reduction
  - B.3 “Extent of occupancy”
  - B.4 Sum of Proportion of Watersheds Occupied value < 0.2
  - B.5 Severe fragmentation, < 6 locations.
2. NatureServe’s Conservation Status Assessments Rank Calculator (see Chapter 2 of this *PABS Handbook*)

These decisions are reviewed by the appropriate PABS Technical Committee and submitted for publication in the Pennsylvania Bulletin in §75.1, List of Endangered Species; §75.2, List of Threatened Species; and §75.3, List of Candidate Species.

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### UPDATING LISTS

The PFBC updates Endangered, Threatened, and Candidate species lists as data become available from surveys. There is no predetermined frequency for evaluations.

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### RECOVERY PLANS

Species Action (Recovery) Plans have been developed for a subset of PFBC Threatened and Endangered species, but given limited staff capacity, the agency has been unable to develop documents for all listed species. Species Action Plans are currently available for:

[Bog Turtle](#) (*Glyptemys muhlenbergii*)  
[Chesapeake Logperch](#) (*Percina bimaculata*)  
[Eastern Massasauga](#) (*Sistrurus catenatus catenatus*)  
[Eastern Pearlshell](#) (*Margaritifera margaritifera*)  
[Eastern Spadefoot](#) (*Scaphiopus holbrookii*)  
[Salamander Mussel](#) (*Simpsonaias ambigua*)  
[Timber Rattlesnake](#) (*Crotalus horridus*)

In the PFBC 2020-2023 Strategic Plan ([PFBC 2020](#)), the Commission has set as objectives by 30 June 2023, to:

- complete or develop 13 non-game species action plans;
- update the seven existing species action plans (listed above);
- develop six species action plans for Endangered and Threatened species including: Eastern Mud Turtle (*Kinosternon subrubrum*), Northern Redbelly Cooter (*Pseudemys rubriventris*), Pistolgrip (*Tritogonia verrucosa*), Round Hickorynut (*Obovaria subrotundra*), Longnose Sucker (*Catostomus catostomus*), and inland (Allegheny) populations of Burbot (*Lota lota*).

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#### THREATENED AND ENDANGERED SPECIES ACTIONS

Objective prioritization criteria to address Species of Greatest Conservation Need (includes T&E species) are found in the Pennsylvania Wildlife Action Plan, Chapter 1 ([PGC-PFBC 2015](#)). This approach offers initial guidance; however, how many species are eventually selected for survey, monitoring, and conservation actions are subject to factors such as available staff and funding.

Several components (e.g., species, habitats) of the Pennsylvania Wildlife Action Plan are represented in the web-based, user-interactive Conservation Opportunity Area (COA) tool ([PGC-PFBC 2021](#)), co-administered by the PGC and PFBC. This tool contains conservation actions identified for Species of Greatest Conservation Need, including Threatened and Endangered species, and their habitats; species locations are not provided. To inform users of potential occurrences within an Area of Interest (AOI), the resulting AOI report includes only the number of sensitive species by jurisdictional agency (i.e., PFBC or PGC). Sensitive species include Threatened, Endangered, and Candidate (PFBC only) species, though this characterization is not exclusively constrained to species listed in those categories.

T&E species, among other tracked species, are considered in the Environmental Review process. Proposed projects submitted through the Pennsylvania Conservation Explorer (PACE) that overlap with habitats or known occurrences of listed species are flagged for additional actions including surveys, adjustments to the project, and habitat enhancements.

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#### FUNDING

Conservation actions for Threatened, Endangered, and Candidate (PFBC only) species are supported primarily through the federally sourced U.S. Fish and Wildlife Service, State and Tribal Wildlife Grants (SWG) Program ([U.S. FWS 2019](#)) and Section 6 (Cooperative Endangered Species Conservation Fund Grants Program) ([U.S. FWS 2021](#)), and the non-federal PFBC Fish Fund. Among other funding sources, though not specifically dedicated to these species, are DCNR's Wild Resources Conservation Fund ([PA DCNR 2022](#)) and the National Fish and Wildlife Fund ([NFWF 2022](#)); and PFBC's Restricted Revenue Accounts can also be used to support T&E conservation.

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## HABITAT PROTECTIONS

In Environmental Review through the PA Conservation Explorer (PACE) tool, “core” and “supporting” habitats are delineated within Conservation Planning Polygons (CPPs). “Core” habitats are within the immediate vicinity of an Element Occurrence (EO) and considered essential for the continued presence of the animal. “Supporting” habitats are important during at least one part of an animal’s life history, but with reduced level of impact on immediate survival.

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## ENVIRONMENTAL REVIEW THROUGH THE PA DEP PERMITTING PROCESS AND MITIGATION

As a natural resources agency with jurisdictional authorities for Pennsylvania’s fish, amphibian, reptile, freshwater mussels, other aquatic invertebrates, and their habitats, the PFBC has responsibility for reviewing environmental permits for potential impacts to these resources. This environmental review is conducted in the PFBC Division of Environmental Services (DES) ([PFBC 2022](#)) which includes administrative sections for: Aquatic Resources, Natural Diversity, Watershed Analysis, and Natural Gas. The broad range of potential impacts are reflected in the types of reviews, including transportation projects; residential, commercial and industrial developments; acid precipitation; agricultural impact; erosion and sedimentation impacts; and conventional and unconventional natural gas extraction and transportation. All projects requiring a PA DEP permit, regardless of landowner status, are subject to the Environmental Review process.



## PENNSYLVANIA GAME COMMISSION (PGC)

Contact: Bureau of Wildlife Management, Wildlife Diversity Division, 717-787-5529.

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### STATEMENT OF THE ROLE OF THE AGENCY

The PGC is mandated to “protect, propagate, manage and preserve the game or wildlife population as a renewable natural resource of this Commonwealth” (34 PA Code, Chapter 21, Subchapter D, §2161 (a)).

Further, the statute (34 PA Code, Chapter 21, Subchapter D, §2167) “Endangered or Threatened Species” (Appendix A) allows the PGC to “add or remove any wild bird or wild animal native to this Commonwealth to or from the Pennsylvania native list of Endangered or Threatened species.” 34 Pa.C.S. §322(8) also provides the Commission the authority to “[a]dd to or change the classification of any wild bird or wild animal.” The regulation implementing these statutes (58 Pa. Code §133) provides the list of Threatened and Endangered species (Subchapter B—Birds and C—Mammals).

The Game Commission serves on the frontlines of wildlife conservation. The agency puts wildlife first in conservation decisions using best available science. As such, PGC actively engages state, regional, national, and international partners to evaluate species’ population status and Pennsylvania’s stewardship responsibility for jurisdictional species. The PGC jointly develops and administers, with the PFBC, the non-regulatory Pennsylvania Wildlife Action Plan to guide voluntary action for Species of Greatest Conservation Need (SGCN) by all Pennsylvanians. Actions benefitting SGCN in a non-regulatory arena supplement the state’s regulatory Environmental Review processes for threatened or endangered species.

The PGC owns and manages more than 1.5 million acres of State Game Lands throughout the Commonwealth to support habitat for diverse wildlife populations and provide opportunities for lawful hunting and trapping. Secondary recreational uses are also permitted in accordance with PGC regulations. Requirements for Threatened, Endangered, and SGCN species are factored into State Game Lands Comprehensive Plans, which are reviewed every five years and updated every 10 years. A comprehensive wildlife habitat manual presents “best management practices” for State Game Lands managers to diversify habitat and support an array of wildlife. All projects occurring on Game Lands are screened for T&E species conflicts prior to implementation and avoidance measures are followed when they apply.

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### LISTING/DELISTING CRITERIA

Thresholds of imperilment justifying state listing are based on the definitions of Endangered and Threatened species found in 58 Pa. Code §133.4 (see Chapter 3 of this *PABS Handbook*).

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### UPDATING LISTS

Regulatory status changes for Pennsylvania birds and mammals occur on an as-needed basis. Proposed status changes are typically triggered by new or updated species data regarding population size (increase or decrease), distribution (expansion or contraction), and/or trend (improving or declining). Additionally, changes to federal regulatory status may trigger a proposed state status change, per 58 Pa. Code §133.4.

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### RECOVERY PLANS

PGC biologists develop species management plans for PCG Board of Commissioners review, and following a minimum 30-day public comment period, approval. These management plans, which include measurable

downlisting<sup>2</sup> and delisting targets, serve as recovery plans for state-listed species. If a species is federally listed as Threatened or Endangered, the federal recovery plan is the guiding document for state recovery actions, where applicable (e.g., Great Lakes Piping Plover (*Charadrius melodus*), USFWS 2003; Indiana Bat (*Myotis sodalis*), USFWS 2007). Due to limited staffing capacity to complete individual species management plans for every state-listed species, the [Pennsylvania Wildlife Action Plan](#) (PGC-PFBC 2015) provides guidance regarding conservation goals and necessary conservation actions. This comprehensive blueprint for at-risk species conservation is updated every 10 years.

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## T&E ACTIONS

Federal or state Threatened and Endangered birds and mammals are prioritized for surveys, conservation action implementation, and monitoring through annual Game Commission Wildlife Diversity Division work plans, and more specifically through the Environmental Review process. Specific locations of Threatened or Endangered birds and mammals sensitive to human disturbance or vulnerable to collection are masked from public view in web-accessible mapping platforms.

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## FUNDING

The PGC, an independent Commonwealth agency, does not receive state General Fund dollars. Federal or state Threatened and Endangered bird and mammal recovery is funded primarily through federal grants to states (e.g., Cooperative Endangered Species Conservation Fund (Section 6) Grants; State and Tribal Wildlife Grants; Pittman-Robertson); mitigation programs established by the USFWS (e.g., Indiana Bat Conservation Fund); and the Game Fund. Additionally, private industry may partner with the Game Commission to implement best practices for threatened and endangered species, (e.g., installing bat gates to prevent human disturbance to hibernating bats). Occasionally, nonprofit organizations provide funding for specific projects.

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## HABITAT PROTECTIONS

Habitat conservation for T&E birds and mammals occurs in a variety of ways depending on the species and the circumstances. For example, federally listed species may have Designated Critical Habitat in association with a federal recovery plan (e.g., Great Lakes Piping Plover) which requires federal agencies to consult with the USFWS prior to work implementation (Endangered Species Act §7). State-listed species do not have a counterpart to federal Designated Critical Habitat; however, ecologically based core and supporting habitat conservation planning polygons have been developed for use in the Environmental Review process. The Environmental Review process is only mandatory for certain projects with potential stream impacts.

On State Game Lands, the PGC screens for potential habitat management conflicts with T&E species occurrences prior to initiating work and, as applicable, follows avoidance measures. Further, an initiative to proactively plan for the conservation of federally listed Indiana Bat and Northern Long-eared Bat across nearly 4 million acres of state-owned forested land was recently completed by the PGC and DCNR (ICF and Environmental Solutions & Innovations 2020). Forest management strategies, such as removing timber and prescribed fire, have the potential to adversely impact bat habitat used for foraging, roosting, maternity colonies, spring staging, fall swarming, and migration. However, forest management activities also create foraging habitat and can benefit bats and many other species. To maximize avoidance and mitigate impacts, the PGC and DCNR applied for and were issued an Incidental Take Permit by the USFWS in December 2020. A requirement of the Incidental Take Permit is the

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<sup>2</sup> For definition, see Chapter 2 of this *PABS Handbook* (page 2-9).

implementation of a Habitat Conservation Plan that allows the agencies to limit and address impacts across 3.8 million forested acres over a 30-year period, rather than on a project-by-project basis. This allows both agencies to be more proactive in planning for the conservation of Indiana Bat and Northern Long-eared Bat across the state lands system. Initiatives such as seasonal restrictions, canopy retention, and hibernacula protection are incorporated into the plan to aid in the conservation of Indiana Bat, Northern Long-eared Bat, and other declining species.

Wetlands are protected by several federal and state regulations (e.g., Federal Clean Water Act of 1977, as amended 1987; Federal Rivers and Harbors Act of 1899; Pennsylvania Dam Safety and Encroachments Act of 1978; Pennsylvania Clean Streams Law of 1937, as amended 2014) that are administered by the U.S. Army Corps of Engineers and PA DEP, respectively.

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#### ENVIRONMENTAL REVIEW THROUGH THE PA DEP PERMITTING PROCESS AND MITIGATION

Environmental Review is a regulatory process and is therefore conducted only by governmental agencies. The PA DEP is the state permitting agency, thus responsible for overseeing permit compliance and performance evaluation. Permits and requirements for Threatened or Endangered species, habitats, and wetlands can be found in the PA DEP's [Policy for Pennsylvania Natural Diversity Inventory \(PNDI\) Coordination During Permit Review and Evaluation](#). If initial project screening through the [Pennsylvania Conservation Explorer](#) tool indicates a potential conflict with state bird or mammal species of conservation concern, the applicant is provided instructions to contact the PGC. Environmental Review staff review project specifics and request further information if needed, which may include species surveys. After sufficient consultation, PGC staff produce a letter indicating avoidance, minimization, or if those cannot be achieved, mitigation measures. Typically, seasonal restrictions are recommended to avoid conflict during a critical time in the species' annual cycle (e.g., nesting season).

## PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (PA DEP)

Contact: Director, Office of Program Integration, RA-EP-OPI@pa.gov.

### ENVIRONMENTAL REVIEW THROUGH THE PA DEP PERMITTING PROCESS<sup>3</sup>

The Pennsylvania Department of Environmental Protection (PA DEP) regulates commercial activities within the Commonwealth that affect the environment through a variety of permitting, licensing, and certification programs. They fall under a range of [categories](#):

- Air quality
- Clean water
- Environmental cleanup and brownfields
- Mining
- Oil and gas
- Point and non-point source management
- Radiation protection
- Safe drinking water
- Waste management
- Water management
- Waterways engineering and wetlands

Environmental Review is a regulatory process conducted jointly by the natural resource agencies (DCNR, PFBC, PGC; see Table 1). The PA DEP oversees permit compliance, and in some cases, performance evaluation. Permit requirements for T&E species, their habitats, and wetlands are summarized in the PA DEP's [Policy for Pennsylvania Natural Diversity Inventory \(PNDI\) Coordination During Permit Review and Evaluation](#).

All projects requiring PA DEP permits are screened through the [Pennsylvania Conservation Explorer](#) tool, which includes the Pennsylvania Natural Diversity Inventory<sup>4</sup> Environmental Review (PNDI ER) tool. The PNDI ER tool is a user-friendly interface that enables the public, including applicants, consultants, and project planners to perform PNDI project screenings online. DEP and Conservation District staff can also access the PNDI ER tool for project screening. If PNDI screening indicates a potential conflict with T&E species, the applicant is provided instructions to contact the agency or agencies with jurisdiction for the protection and management of the species.

If a resource agency confirms the potential for impact by the proposed activity, agency staff coordinate with the applicant to work out the measures necessary to avoid the impact and protect the T&E species by modifying the project or devising other ways to protect the species and critical habitat. If such avoidance or mitigation measures are not possible, PA DEP cannot issue the permit or permission. If the applicant disagrees with the natural resource agency's determination of the presence or potential presence of T&E species or the feasibility of avoidance or effectiveness of mitigation measures, site-specific information may be gathered by the applicant to support their position.

The PA DEP may be asked to participate in the coordination process by either the applicant or the natural resource agency or agencies involved. Following resolution of a T&E issue through coordination involving a natural resource agency, the agency issues a letter to the applicant providing documentation of the coordination process and the

<sup>3</sup> Adapted in part from Bureau of Water Supply and Wastewater Management 2003

<sup>4</sup> For clarification of the differences between the Pennsylvania Natural Diversity Inventory (PNDI), Pennsylvania Natural Heritage Program (PNHP), and Pennsylvania Biological Survey (PABS), see Chapter 3 of this *PABS Handbook* (page 3-11).

applicant provides the letter to the PA DEP with the application for permit or approval. When the PA DEP issues a draft permit or approval, the PA DEP notifies the natural resource agency or agencies involved. Draft permits are made available for public participation, at which time T&E issues not previously considered may be brought to the PA DEP's attention for consideration. If a draft permit still does not satisfy the concerns of the natural resource agency, the agency may raise the issue with PA DEP or US Environmental Protection Agency during the public comment period.

The other subjects of this chapter—species listing/delisting, recovery plans, T&E actions, funding, habitat protections, and environmental review and mitigation—are the responsibilities of the agencies with the statutory jurisdiction for the species (DCNR for plants, PFBC for aquatic organisms, PGC for birds and mammals, and USFWS for federally listed species) and the permit applicants. They are covered in the preceding sections.

## REFERENCES

- Bureau of Water Supply and Wastewater Management. 2003. *Water Quality Antidegradation Implementation Guidance*. Document number 391-0300-002, Department of Environmental Protection, Harrisburg, Pennsylvania. 137 pp.
- ICF and Environmental Solutions & Innovations. 2020. *Forestry Habitat Conservation Plan for Bats on Pennsylvania State Game Lands, State Forests, and State Parks*. Fairfax, Virginia. Prepared for Pennsylvania Game Commission and Department of Conservation and Natural Resources, Harrisburg. [regulations.gov/document/FWS-R5-ES-2013-0090-0014](https://www.regulations.gov/document/FWS-R5-ES-2013-0090-0014). Accessed 2022-07-14.
- NFWF (National Fish and Wildlife Foundation). 2022. Programs. [nfwf.org/programs](https://www.nfwf.org/programs). Accessed 2022-01-27.
- PADCNR (Pennsylvania Department of Conservation and Natural Resources). 2022. Wild Resources Conservation Program. [dncr.pa.gov/Conservation/Biodiversity/WildResourceConservationProgram/Pages/default.aspx](https://dncr.pa.gov/Conservation/Biodiversity/WildResourceConservationProgram/Pages/default.aspx). Accessed 2022-01-27.
- PFBC (Pennsylvania Fish and Boat Commission). 2020. Pennsylvania Fish and Boat Commission Strategic Plan: July 1, 2020-June 30, 2023. Harrisburg, PA. [fishandboat.com/AboutUs/AnnualReports/Documents/strategicPlans/StrategicPlan2020-2023.pdf](https://fishandboat.com/AboutUs/AnnualReports/Documents/strategicPlans/StrategicPlan2020-2023.pdf)
- PFBC (Pennsylvania Fish and Boat Commission). 2022. Environmental Services. [fishandboat.com/Resource/EnvironmentalServices/Pages/default.aspx](https://fishandboat.com/Resource/EnvironmentalServices/Pages/default.aspx). Accessed 2022-01-27.
- PGC-PFBC (Pennsylvania Game Commission and Pennsylvania Fish & Boat Commission). 2015. Pennsylvania Wildlife Action Plan, 2015-2025. C. Haffner and D. Day, editors. Pennsylvania Game Commission and Pennsylvania Fish & Boat Commission. [fishandboat.com/Resource/StateWildlifeActionPlan/Pages/default.aspx](https://fishandboat.com/Resource/StateWildlifeActionPlan/Pages/default.aspx)
- PGC-PFBC (Pennsylvania Game Commission and Pennsylvania Fish & Boat Commission). 2021. Conservation Opportunity Area tool. [wildlifeactionmap.pa.gov](https://wildlifeactionmap.pa.gov). Accessed 2022-01-27.
- U.S. EPA (U.S. Environmental Protection Agency). 2021. Permit Program under CWA [Clean Water Act] Section 404. [epa.gov/cwa-404/permit-program-under-cwa-section-404](https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404). Accessed 2022-01-27.
- U.S. FWS (U.S. Fish and Wildlife Service). 2017. Critical Habitat: What is it? [fws.gov/sites/default/files/documents/critical-habitat-fact-sheet.pdf](https://www.fws.gov/sites/default/files/documents/critical-habitat-fact-sheet.pdf). Accessed 2022-01-27.
- U.S. FWS (U.S. Fish and Wildlife Service). 2019. State Wildlife Grant Program-Overview. Wildlife and Sport Fish Restoration Program. [fws.gov/wsfrprograms/Subpages/GrantPrograms/SWG/SWG.htm](https://www.fws.gov/wsfrprograms/Subpages/GrantPrograms/SWG/SWG.htm). Accessed 2022-01-27.
- U.S. FWS (U.S. Fish and Wildlife Service). 2021. Grants Overview. Cooperative Endangered Species Conservation Fund Grants. Endangered Species Program, Ecological Services. [fws.gov/endangered/grants](https://www.fws.gov/endangered/grants). Accessed 2022-01-27.