



Appendix 1.2

Determining Species of Greatest Conservation Need (SGCN) in the 2025-2035 Pennsylvania Wildlife Action Plan: *Flowchart Guidance and Flowcharts*

Table of Contents

Background	3
Reference Data.....	3
Species Eligible for SGCN Consideration.....	3
Flowchart Definitions	4
STEP 1: Animal SGCN Determination	4
Q1. Is the animal native and regularly occurring in Pennsylvania?	4
Q2. Do sufficient data exist to assess species status at the state scale?	4
Q3. Do sufficient data exist to assess species status at the global scale?	4
Q3a. Is the species of global concern (i.e., G1-G3, G1G2, G1G3, G2G3, G2G4, G3G4, IUCN Red List Critically Endangered (CR), Endangered (EN), Vulnerable (VU))?	4
Q4. Is the species of federal concern (Endangered Threatened, Proposed, Candidate)?	5
Q5. Do sufficient data exist to assess species status at the regional scale?	5
Q6. Is the species a Northeast U.S. regional conservation priority?	5
Q6a. Within the species' native range in PA, has abundance or distribution experienced a cumulative short-term (i.e., within 10 years) decline or range contraction of $\geq 10\%$?	6
Q6b. Is the species' overall threats impact score High or Very High?	6
Q7. Is the species of Pennsylvania concern (Endangered, Threatened, Candidate; S1-S3, S1S2, S1S3, S2S3, S2S4, S3S4, recoverable SH, or recoverable SX)?	6
Q8a. Is Pennsylvania responsible for a significant portion ($\geq 10\%$) of the population, or subpopulation? / Q8b. Is Pennsylvania responsible for a significant portion ($\geq 25\%$) of the species' range?	7
Q9. Within the species' native range in PA, has abundance or distribution experienced a cumulative short-term (i.e., within 10 years) decline or range contraction of $\geq 10\%$?	7



Q10. Is the species' overall threats impact score High or Very High?	7
STEP 1A: Migratory & Wintering Bird SGCN Determination.....	8
Q1. Is the bird native to Pennsylvania during the [migration/wintering] season?	8
Q2. Is the bird federally endangered or threatened?	8
Q3. Is the bird of conservation concern on a recent (≤ 10 -year-old) priority species list maintained by an established organization?	8
Q4 (migration season). Is the bird a regular migrant in Pennsylvania?	9
Q6 (wintering season). Is the bird a regular wintering bird in Pennsylvania?	9
Q5. Does Pennsylvania host a significant proportion ($\geq 25\%$) of the migrant population in the eastern U.S.?	9
Q7. Does Pennsylvania host a significant proportion ($\geq 10\%$) of the wintering population in the eastern U.S.?	9
Q8. Is the bird a 2025-2035 Pennsylvania Wildlife Action Plan Breeding or Migration Season Bird SGCN that winters in Pennsylvania?	9
STEP 2: Plant SGCN Determination	10
Q11. Is the wild plant native and regularly occurring in Pennsylvania?	10
Q12. Does the wild plant serve an important ecological function to support more than one animal SGCN, as documented in peer-reviewed scientific literature?	10
Q13. Is the animal SGCN exclusively dependent on the native Pennsylvania wild plant species during any part of its life cycle?	10
Q13a. Within the species' native Pennsylvania range, has abundance or distribution experienced a cumulative short-term (i.e., within 10 years) decline or range contraction of $\geq 10\%$?	10
Q14. In PA, is the wild plant species' overall threats impact score High or Very High?	10
Literature Cited.....	11
SPECIES OF GREATEST CONSERVATION NEED (SGCN) FLOWCHARTS	12

[This section of page intentionally blank.]



Background

The *Best Practices for State Wildlife Action Plans* recommends a well-defined method for determining Species of Greatest Conservation Need (SGCN) to provide a clear and repeatable process for users (AFWA et al. 2012; also see Groves 2003). To implement this “best practice” in the 2015-2025 Pennsylvania Wildlife Action Plan (PA WAP), we developed a flowchart to illustrate decision nodes for determining Pennsylvania’s SGCN based on a variety of factors. The final selection criteria emerged after several iterations over the course of a year with input from the PA WAP Steering and Advisory Committees, Pennsylvania Biological Survey members, and agency staff. Any fish, amphibian, reptile, assessed terrestrial and aquatic invertebrate, bird, or mammal known to regularly occur (i.e., not vagrants) in Pennsylvania for any part of its life cycle was eligible for review against flowchart criteria, with limited exceptions for avifauna (see [PGC-PFBC 2015, Chapter 1](#)).

For the 2025-2035 PA WAP, we retain the animal SGCN selection flowchart, with minor modifications, include migratory and wintering bird criteria more explicitly, and add plant SGCN criteria in a second step to accommodate the addition of plant SGCN when sustained federal funding with a plant supplement is enacted by Congress (e.g., Recovering America’s Wildlife Act).

This document provides definitions and, as needed, additional information for each flowchart criterion. Each flowchart decision node listed below is followed by definitions and, as needed, additional information pertaining to that decision node. In all cases, ‘best available’ data must be used for determinations.

Reference Data

- Global assessments: *NatureServe and International Union on the Conservation of Nature global conservation statuses* (NatureServe Explorer; IUCN Red List)
- National assessments: *U.S. Endangered Species Act*; *U.S. Fish and Wildlife Service At-risk Species; Road to Recovery Tipping Point and On-alert Species*.
- Northeast U.S. Regional assessments: *Northeast Association of Fish and Wildlife Agencies Regional Species of Greatest Conservation Need* (Northeast Fish and Wildlife Diversity Technical Committee 2024).
- State assessments: *Pennsylvania Fish and Boat Commission Title 34, Chapter 75* (endangered, threatened, and candidate fish, reptiles, amphibians, and aquatic invertebrates); *Pennsylvania Game Commission Title 34, Chapter 133* (endangered and threatened birds and mammals); *Subnational conservation status assessments (S-rank)* - To provide consistency in approach, the Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission assessed state rarity, trends, and threats for each species within focal taxonomic groups using the NatureServe Rank Calculator Version 3.2 (NatureServe 2020).

Species Eligible for SGCN Consideration

Any native fish, amphibian, reptile, terrestrial and aquatic invertebrate, bird, or mammal known to regularly occur (i.e., not vagrants) in Pennsylvania for any part of its life cycle, unless the jurisdictional agency and Pennsylvania Biological Survey technical committee exclude the species from consideration (e.g., not a conservation concern).



Flowchart Definitions

STEP 1: Animal SGCN Determination

Q1. Is the animal native and regularly occurring in Pennsylvania?

PENNSYLVANIA NATIVE SPECIES (i.e., indigenous): An extant, or historically present, species occurring in its native range within the state without direct human assistance (adapted from Pennsylvania Biological Survey 2021). Experimental populations are not considered native.

REGULARLY OCCURRING: Expected to be found annually within suitable habitat (includes “recoverable” SH or SX species; see Table 2 for definitions). Non-recoverable “SH” and “SX” are not considered “regular” occurrence species. *Note:* Federal and state endangered or threatened species are exceptions to annual occurrence criteria.

Q2. Do sufficient data exist to assess species status at the state scale?

SUFFICIENT DATA – STATE SCALE: Species lack sufficient information if *abundance and/or distribution data* are not documented or are unreliable for making an informed assessment of the extirpation risk to a species with a level of certainty (i.e., S-rank is “SU”). Additionally, *threat information* (e.g., S-rank threats assessment) must be available with a level of certainty to identify conservation actions. Species lacking “sufficient data,” as defined, are considered “Data Deficient”.

Q3. Do sufficient data exist to assess species status at the global scale?

SUFFICIENT DATA - GLOBAL SCALE: Species lack sufficient information if *abundance and/or distribution data* are not documented or are unreliable for making an informed assessment of the extirpation risk to a species with a level of certainty (i.e., insufficient data to calculate a G-rank [“GU”] or IUCN Red List category “DD”^a). This category also includes species with published taxonomic uncertainties that preclude our ability to assess its conservation status.

^aAs defined by the IUCN, “a taxon is Data Deficient (DD) when there is inadequate information to make a direct, or indirect, assessment of its risk of extirpation based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well-known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that a threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified” (IUCN 2012).

Q3a. Is the species of global concern (i.e., G1-G3, G1G2, G1G3, G2G3, G2G4, G3G4, IUCN Red List Critically Endangered (CR), Endangered (EN), Vulnerable (VU))?

Only G-ranks or IUCN assessments completed between 2010-2024 are eligible for this criterion. If a status is older than 2010, continue to Q4.

GLOBAL CONCERN: Species determined to be vulnerable to critically imperiled at the global scale by NatureServe or the IUCN (Table 1). This includes G1, G2, G3, G1G2, G1G3, G2G3, G2G4, and G3G4 status categories. G3G5 species are not automatically SGCN and must continue to be evaluated based on subsequent flowchart criteria.



Table 1. Species global conservation status categories from NatureServe and IUCN Red List of Threatened Species™.

<i>NatureServe</i>
G1 Critically Imperiled
G2 Imperiled
G3 Vulnerable
G1G2 Denotes uncertainty, critically imperiled - imperiled
G1G3 Denotes uncertainty, critically imperiled - vulnerable
G2G3 Denotes uncertainty, imperiled - vulnerable
G2G4 Denotes uncertainty, imperiled – apparently secure
G3G4 Denotes uncertainty, vulnerable – apparently secure
<i>IUCN RedList of Threatened Species™</i>
CR Critically Endangered
EN Endangered
VU Vulnerable

Q4. Is the species of federal concern (Endangered Threatened, Proposed, Candidate)?

FEDERAL CONCERN: Referring to species receiving, or deemed eligible to receive, federal protection under the Endangered Species Act (ESA) of 1973, as amended. These include endangered, threatened, candidate or proposed fish, amphibian, reptile, terrestrial and aquatic invertebrate, bird or mammal species known to occur in Pennsylvania during any stage of its life cycle. The current list of federal concern species is available through the U.S. Fish and Wildlife Services [Environmental Conservation Online System](#).

Endangered – “Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man” (ESA, Section 3 (Definitions)).

Threatened – “Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (ESA, Section 3 (Definitions)).

Proposed - Any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under Section 4 of the Endangered Species Act. [Link to Pennsylvania proposed species for ESA listing](#).

Candidate – A species under consideration for official listing for which there is sufficient information to support listing (USFWS Environmental Conservation Online System, accessed 23 July 2024). [Link to Pennsylvania candidate species for ESA listing](#).

Q5. Do sufficient data exist to assess species status at the regional scale?

SUFFICIENT DATA - REGIONAL SCALE: The species has enough information *abundance and/or distribution data* to be quantitatively assessed by an established multistate organization.

Q6. Is the species a Northeast U.S. regional conservation priority?

REGIONAL CONSERVATION PRIORITY: Selected as a priority species for conservation by an established Northeast U.S. regional conservation group, 2014-2024 (e.g., U.S. Fish and Wildlife



Service Region Science Applications Program, Joint Venture partnerships, Northeast Association of Fish and Wildlife Agencies Fish and Wildlife Diversity Technical Committee, Northeast Partners in Amphibian and Reptile Conservation).

Q6a. Within the species' native range in PA, has abundance or distribution experienced a cumulative short-term (i.e., within 10 years) decline or range contraction of $\geq 10\%$?

DECLINING ABUNDANCE OR DISTRIBUTION: Reference 2024 NatureServe Rank Calculator results. The timeframe for short-term assessment is 10 years or 3 generations, whichever is greater. For a species to be considered a SGCN, species abundance or distribution will have experienced a cumulative decline of at least 10% in the last ten years within its native range (e.g., watershed) in Pennsylvania.

Q6b. Is the species' overall threats impact score High or Very High?

OVERALL THREATS IMPACT SCORE: The overall threats impact score is derived through the NatureServe rank calculation for species conservation status. Reference the 2024 NatureServe subnational Rank Calculator results for this score.

Q7. Is the species of Pennsylvania concern (Endangered, Threatened, Candidate; S1-S3, S1S2, S1S3, S2S3, S2S4, S3S4, recoverable SH, or recoverable SX)?

STATE LISTED: Species identified in Pennsylvania Code [Title 58, Chapter 75](#) (relating to Fish and Boat Commission) & [Chapter 133](#) (relating to Game Commission).

STATE IMPERILED: Species determined to be "vulnerable" up to "critically imperiled" in Pennsylvania (*i.e.*, S-rank using NatureServe methods; Table 2), or Pennsylvania Biological Survey Species of Special Concern equivalent, if assessed between 2014-2024. S-ranks for automatic inclusion as SGCN are S1, S2, S3, S1S2, S1S3, S2S3, S2S4, S3S4. S3S5 species are not automatically SGCN and must continue to be evaluated based on subsequent criteria in the flowchart.

A "**recoverable**" and possibly extirpated (SH) species is "known from only historical records but with hope of rediscovery. There is evidence the species or ecosystem may no longer be present in the jurisdiction, but evidence is insufficient to state with certainty. Examples of such evidence include: (1) that a species has not been documented in approximately 20-40 years in human-dominated landscapes despite some searching and/or some evidence of significant habitat loss or degradation; (2) that a species or ecosystem has been searched for unsuccessfully, but not thoroughly enough to presume that it is no longer present in the jurisdiction." (Master et al. 2012).

A "recoverable SX (presumed state extirpated)" species is believed to no longer occur in the state, but whose range is expanding, and Pennsylvania supports, or could support through active habitat management, available habitat for the species. Public values must also be favorable for its recovery within the Commonwealth.



Table 2. State ranks (S-rank) based upon NatureServe methods.

<i>NatureServe</i>
S1 Critically imperiled
S2 Imperiled
S3 Vulnerable
S1S2 Denotes uncertainty, critically imperiled - imperiled
S1S3 Denotes uncertainty, critically imperiled - vulnerable
S2S3 Denotes uncertainty, imperiled - vulnerable
S2S4 Denotes uncertainty, imperiled – apparently secure
S3S4 Denotes uncertainty, vulnerable – apparently secure
SX Presumed Extirpated
SH Possibly Extirpated

Q8a. Is Pennsylvania responsible for a significant portion ($\geq 10\%$) of the population, or subpopulation? / Q8b. Is Pennsylvania responsible for a significant portion ($\geq 25\%$) of the species' range?

PA RESPONSIBILITY: A species for which Pennsylvania supports $\geq 10\%$ of its North American population/subpopulation or $\geq 25\%$ of its North American distribution (Pennsylvania Biological Survey 2021). Use population data for this assessment, if available.

Q9. Within the species' native range in PA, has abundance or distribution experienced a cumulative short-term (i.e., within 10 years) decline or range contraction of $\geq 10\%$?

DECLINING ABUNDANCE OR DISTRIBUTION: Reference the 2024 NatureServe Rank Calculator results. The timeframe for short-term assessment is 10 years or 3 generations, whichever is greater. For a species to be considered a SGCN, species abundance or distribution will have experienced a cumulative decline of at least 10% in the last ten years within its native range (e.g., watershed) in Pennsylvania.

Q10. Is the species' overall threats impact score High or Very High?

OVERALL THREATS IMPACT SCORE: The overall threats impact score is derived through the NatureServe rank calculation for species conservation status. Reference the 2024 NatureServe Rank Calculator results for this score.



STEP 1A: Migratory & Wintering Bird SGCN Determination

Q1. Is the bird native to Pennsylvania during the [migration/wintering] season?

See [Q1](#) above.

Q2. Is the bird federally endangered or threatened?

FEDERALLY ENDANGERED OR THREATENED: Referring to federally protected species under the Endangered Species Act (ESA) of 1973, as amended. The current list of federal concern species is available through the U.S. Fish and Wildlife Services [Environmental Conservation Online System](#).

Endangered – “Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man” (ESA, Section 3 (Definitions)).

Threatened – “Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range” (ESA, Section 3 (Definitions)).

Q3. Is the bird of conservation concern on a recent (≤ 10 -year-old) priority species list maintained by an established organization?

BIRD OF CONSERVATION CONCERN: Species that appear on one or more of the following priority species lists:

Canada’s Species at Risk Act (SARA)

Government of Canada. 2025. Schedule 1 of the Species at Risk Act (S.C. 2002, c. 29). Available from <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/species-list.html> (accessed February 2025).

Northeast U.S. Regional Species of Greatest Conservation Need (RSGCN)

Northeast Fish and Wildlife Diversity Technical Committee. 2024. Northeast Regional Species of Greatest Conservation Need (RSGCN) Database, version 4.1. Prepared for the Northeast Association of Fish and Wildlife Agencies by Terwilliger Consulting, Inc. Available from <https://www.northeastwildlifediversity.org> (accessed February 2025).

Raptor Population Index Raptors at Risk

Oleyar, D., D. Ethier, L. Goodrich, D. Brandes, R. Smith, J. Brown, and J. Sodergren. 2021. The Raptor Population Index: 2019 analyses and assessments. Available from rpi-project.org (accessed February 2025).

Road to Recovery Tipping Point Species

Road to Recovery. 2024. Tipping Point Species. Available from <https://r2rbirds.org/tipping-point-species> (accessed February 2025).

U.S. Fish and Wildlife Service North Atlantic-Appalachian Region At-Risk Species

U.S. Fish and Wildlife Service Regional At-Risk Species Coordination Team. 2021. At risk species: coordinating with states and programs to identify priorities for action. Summary report. United States Department of the Interior, U.S. Fish and Wildlife Service, Science Applications, North Atlantic-Appalachian Region. Hadley, Massachusetts. Available from



<https://www.sciencebase.gov/catalog/item/66708afcd34e89718fa3f89c> (accessed February 2025).

U.S. Fish and Wildlife Service Birds of Conservation Concern

U.S. Fish and Wildlife Service. 2021. Birds of Conservation Concern 2021. United States Department of the Interior, U.S. Fish and Wildlife Service, Migratory Birds. Falls Church, Virginia. Available from <https://www.fws.gov/media/birds-conservation-concern-2021> (accessed February 2025).

Q4 (migration season). Is the bird a regular migrant in Pennsylvania?

Q6 (wintering season). Is the bird a regular wintering bird in Pennsylvania?

REGULAR MIGRANT OR WINTERING BIRD: Adopted the Pennsylvania Ornithological Records (PORC) committee definition for ‘regular’ during any season (Merker et al. 2018), referencing Plummer et al. 2024 for updated regularity status. The PORC definitions do not indicate seasonality, thus Pennsylvania Game Commission ornithologist and/or Pennsylvania Biological Survey Ornithological Committee members confirmed “regular” species occurrence during the migration or wintering seasons.

“Regular: Recorded 8, 9, or 10 of the past 10 years.”

[Merker, H., B. Weber, and D. Farbotnik. The official list of the birds of Pennsylvania. *Pennsylvania Birds* 32:23-27.](#)

[Plummer, J. C. Engstrom, C. Husic, and S. Stoleson. 2024. The official list of the birds of Pennsylvania. *Pennsylvania Birds* 38: 89-94.](#)

Q5. Does Pennsylvania host a significant proportion ($\geq 25\%$) of the migrant population in the eastern U.S.?

Q7. Does Pennsylvania host a significant proportion ($\geq 10\%$) of the wintering population in the eastern U.S.?

The threshold for “significant proportion” is determined by the Pennsylvania Game Commission and Pennsylvania Biological Survey Ornithological Technical Committee. Migratory species have a greater proportion threshold due to temporary residency. Wintering birds, like breeding birds, reside in Pennsylvania for several months. Thus, the breeding bird threshold for significance is applied to wintering birds.

Q8. Is the bird a 2025-2035 Pennsylvania Wildlife Action Plan Breeding or Migration Season Bird SGCN that winters in Pennsylvania?

Several Pennsylvania breeding and migratory bird species are found during winter, yet we lack sufficient information to distinguish year-round residents from temporary visitors. Employing the “precautionary principle”, breeding or migratory birds that are regular winter birds (see above definition) are designated SGCN during the winter season.



STEP 2: Plant SGCN Determination

IMPORTANT: Plant SGCN are NOT identified in the 2025-2035 Pennsylvania Wildlife Action Plan as submitted to the U.S. Fish and Wildlife Service by October 1, 2026. When sustained dedicated funding is available for plant SGCN conservation (e.g., Recovering America's Wildlife Act), plant SGCN may be officially incorporated following this process and federal guidelines for State Wildlife Action Plan revisions.

Q11. Is the wild plant native and regularly occurring in Pennsylvania?

WILD PLANT: Naturally occurring native flora, except those commonly considered an agricultural commodity, including green and nongreen species or subspecies, variety or a part, product, seed or progeny thereof. [45 Pa. Code. § 45.2](#)

PENNSYLVANIA NATIVE SPECIES (i.e., indigenous): An extant, or historically present, species occurring without direct human assistance in its native range within the state (adapted from Pennsylvania Biological Survey 2021).

REGULARLY OCCURRING PLANT: A persistent species with the potential to be found within suitable habitat when environmental conditions are favorable.

Q12. Does the wild plant serve an important ecological function to support more than one animal SGCN, as documented in peer-reviewed scientific literature?

ECOLOGICAL FUNCTION: Brodie et al. (2018) defines ecological function as, “a species interaction or ecological role whereby a species or group of species (functional group) prevent secondary extinctions or endangerment, maintain a biogeochemical flux or pool, or support ecosystem productivity.” For the PA WAP, the ecological function is considered from the perspective of the animal SGCN. Loss of the wild plant would likely jeopardize the animal SGCN's recovery to, or persistence of, sustainable population levels within the Commonwealth.

Q13. Is the animal SGCN exclusively dependent on the native Pennsylvania wild plant species during any part of its life cycle?

EXCLUSIVELY DEPENDENT: The animal SGCN relies solely upon the wild plant species to survive (i.e., there is an obligate relationship between the animal SGCN and the wild plant) during any part of its life cycle. For example, if a SGCN butterfly relies on a larval host plant and a separate nectar plant, both plants are eligible to be plant SGCN.

Q13a. Within the species' native Pennsylvania range, has abundance or distribution experienced a cumulative short-term (i.e., within 10 years) decline or range contraction of $\geq 10\%$?

See [Q10](#) above.

Q14. In PA, is the wild plant species' overall threats impact score High or Very High?

See [Q6b](#) above.



Literature Cited

- Association of Fish and Wildlife Agencies (AFWA), Teaming With Wildlife Committee, State Wildlife Action Plan (SWAP) Best Practices Working Group. 2012. Best Practices for State Wildlife Action Plans – Voluntary Guidance to States for Revision and Implementation. Washington, (DC): Association of Fish and Wildlife Agencies. 80 pages.
- Brodie, J. D., K. H. Redford, and D. F. Frank. 2018. Ecological function analysis: Incorporating species roles into conservation. *Trends in Ecology and Evolution* 33:840-850.
- Groves, C. R. 2003. Drafting a conservation blueprint: a practitioner's guide to planning for biodiversity. Washington (DC): Island Press.
- IUCN. 2012. IUCN Red List Categories and Criteria: Version 3.1. Second edition. Gland, Switzerland and Cambridge, UK: IUCN. iv + 32pp.
- Master, L., D. Faber-Langendoen, R. Bittman, G. A. Hammerson, B. Heide, L. Ramsay, K. Snow, A. Teucher, and A. Tomaino. 2012. NatureServe Conservation Status Assessments: Factors for Evaluating Species and Ecosystem Risk. NatureServe, Arlington, VA.
- NatureServe. 2020. NatureServe Conservation Status Assessments: Rank Calculator Version 3.2. NatureServe, Arlington, VA. Online at <https://www.natureserve.org/conservation-tools/conservation-rank-calculator>.
- Pennsylvania Biological Survey. 2021. Chapter 2: The Pennsylvania Biological Survey (PABS) Status Determination Process. R. Latham, J. Hassinger, and L. Newton, editors. [PABS Handbook](https://www.pabiologicalsurvey.org/pabs-handbook/pabs-handbook-2-status.pdf) (<https://www.pabiologicalsurvey.org/pabs-handbook/pabs-handbook-2-status.pdf>).



SPECIES OF GREATEST CONSERVATION NEED (SGCN) FLOWCHARTS

STEP 1: Animal SGCN

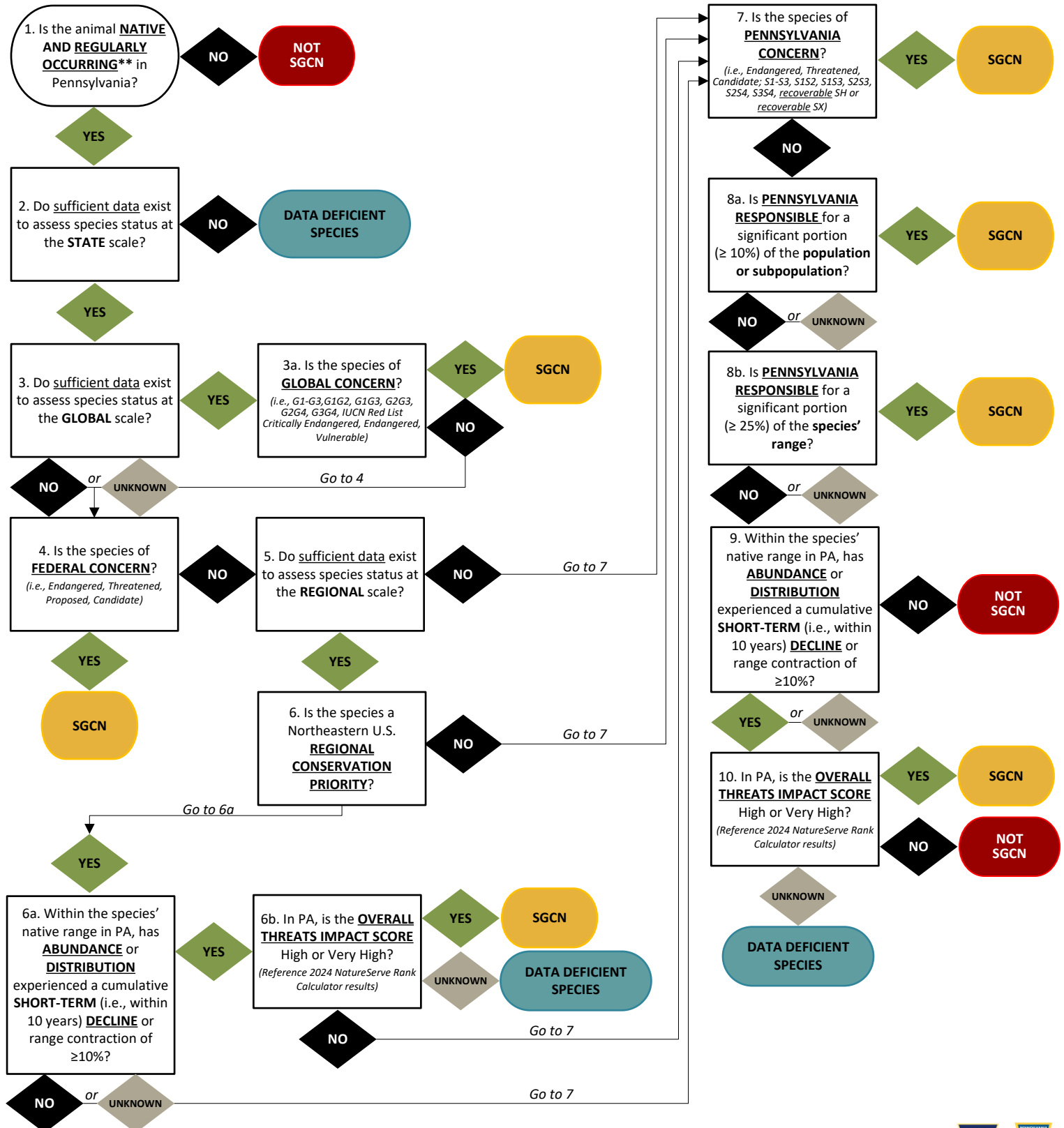
STEP 1A: Migratory and wintering bird SGCN

STEP 2: Plant SGCN*

**To be determined and included once dedicated federal funding for plant SGCN recovery is available.*

STEP 1: ANIMAL* SPECIES OF GREATEST CONSERVATION NEED (SGCN) DETERMINATION

Underlined terms are defined in the flowchart guidance document (Appendix 1.2).

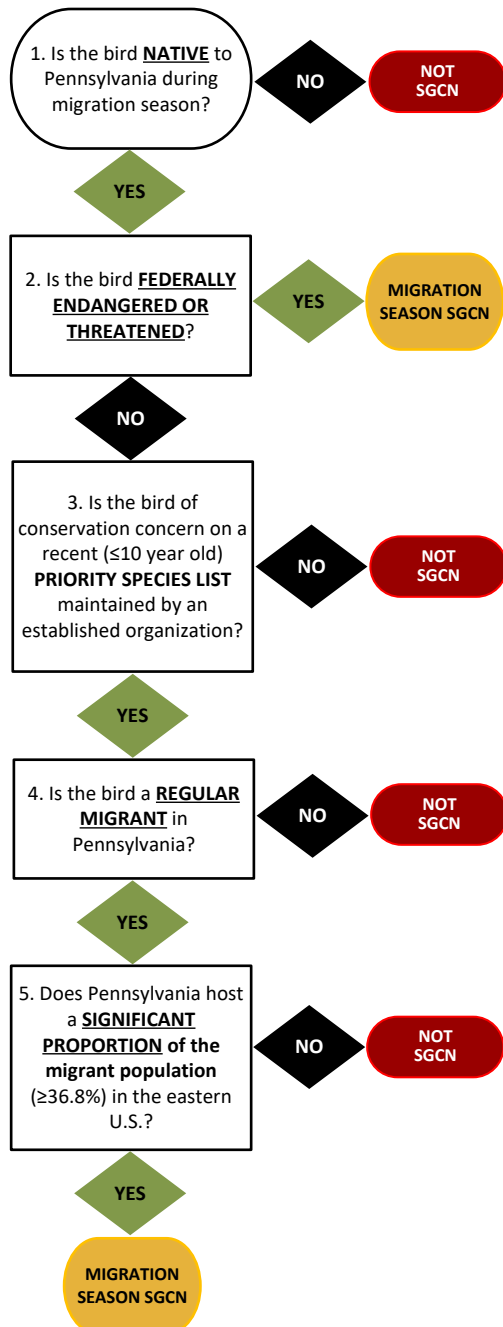


*Amphibians, Birds (breeding¹), Fishes, Invertebrates, Mammals, and Reptiles. [¹ Migratory and wintering bird selection criteria differ due to relative abundance and frequency considerations. See Step 1A.]; **Includes recoverable state historic (SH) or extirpated (SX) species for which actions are possible.

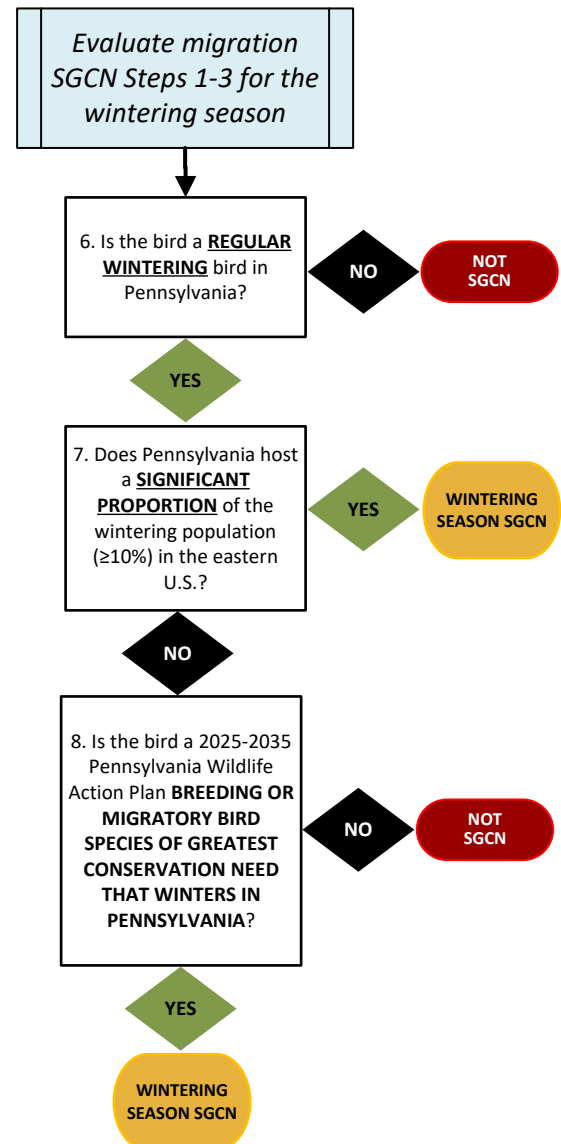
STEP 1A: MIGRATION & WINTERING SEASON BIRD SPECIES OF GREATEST CONSERVATION NEED (SGCN) DETERMINATION

Underlined terms are defined in the flowchart guidance document (Appendix 1.2).

MIGRATION SEASON SGCN DETERMINATION

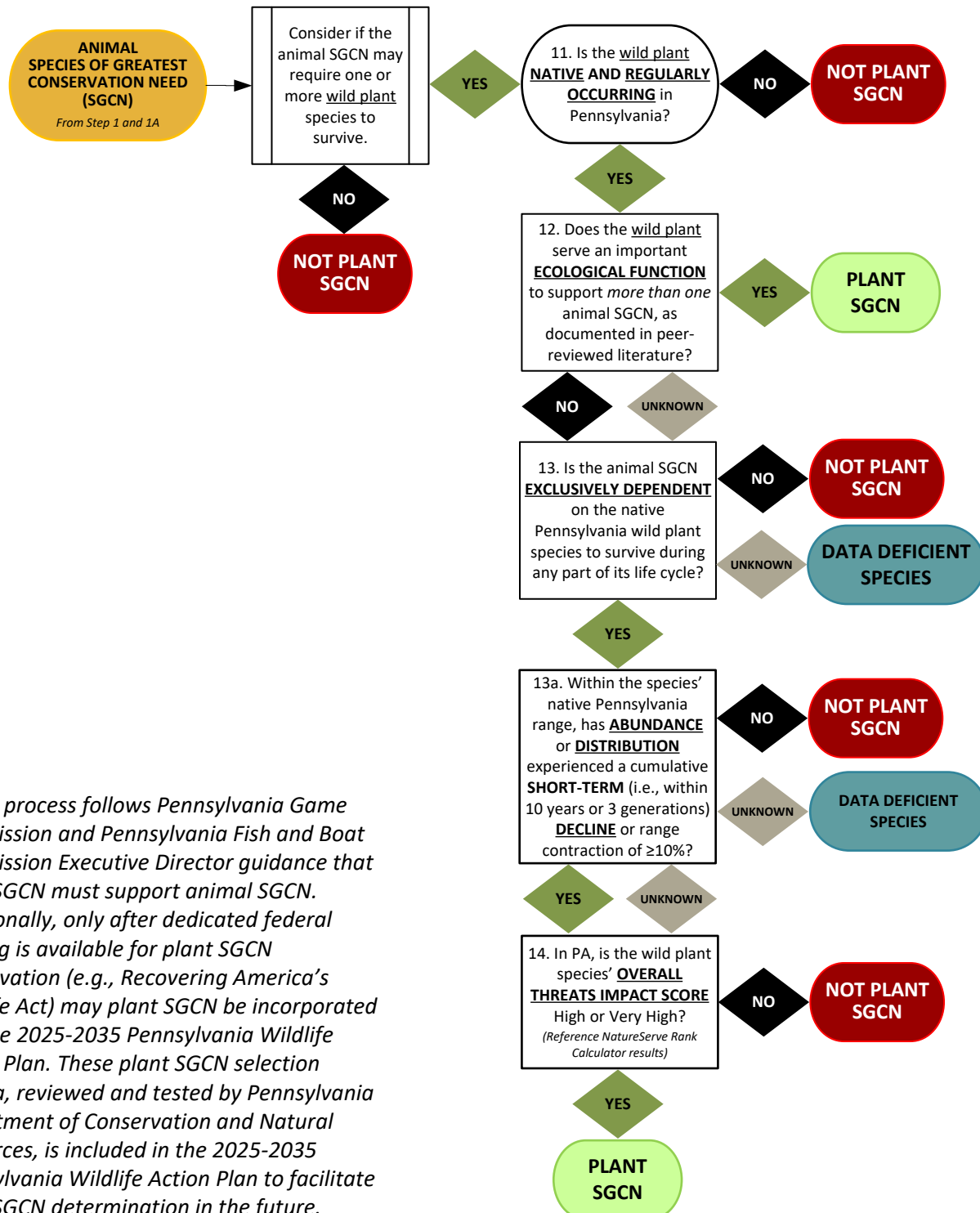


WINTERING SEASON SGCN DETERMINATION



STEP 2: PLANT SPECIES OF GREATEST CONSERVATION NEED (SGCN) DETERMINATION**

Underlined terms are defined in the flowchart guidance document (Appendix 1.2).



***This process follows Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission Executive Director guidance that plant SGCN must support animal SGCN. Additionally, only after dedicated federal funding is available for plant SGCN conservation (e.g., Recovering America's Wildlife Act) may plant SGCN be incorporated into the 2025-2035 Pennsylvania Wildlife Action Plan. These plant SGCN selection criteria, reviewed and tested by Pennsylvania Department of Conservation and Natural Resources, is included in the 2025-2035 Pennsylvania Wildlife Action Plan to facilitate plant SGCN determination in the future.*