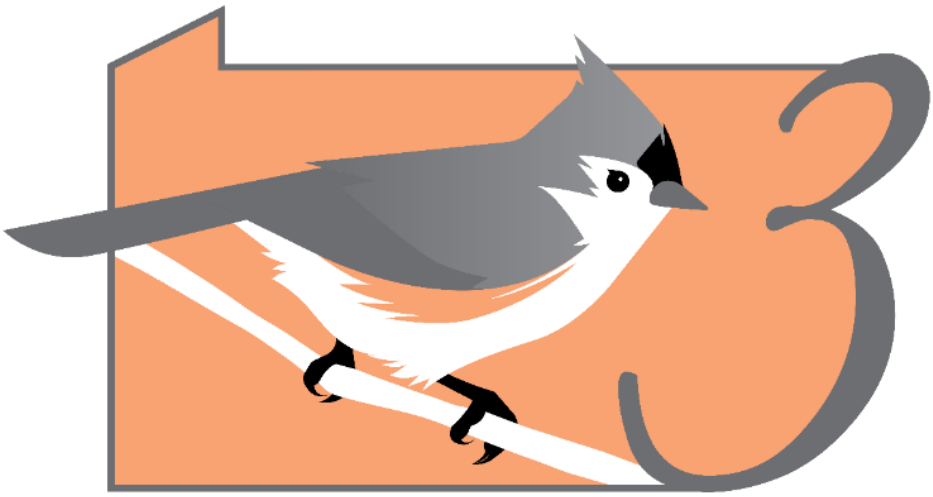
PENNSYLVANIA BIRD ATLAS 3

2024-2029



VOLUNTEER HANDBOOK

A project of the Pennsylvania Game Commission and Hawk Mountain Sanctuary

May 2025, version 3.0

CONTENTS

QUICK START GUIDE FOR THE PENNSYLVANIA BIRD ATLAS

SUBMIT DATA USING THE "PENNSYLVANIA BIRD ATLAS" PORTAL IN EBIRD

- Download the free eBird app for quick and accurate data collection in the field.
- Click 'Join Project' at https://ebird.org/atlaspa/home. You must join the project to be able to participate.
- If using the mobile app version of eBird, select Pennsylvania Bird Atlas from your available projects on the app home screen. Select this option any time you are creating a checklist for the Atlas, or you can turn on the "Remember selections" feature if you are atlasing regularly.
- If you are using the web version of eBird instead, enter and submit Atlas checklists at https://ebird.org/atlaspa/submit.

SUBMIT DATA FROM ANYWHERE IN THE STATE AT ANY TIME

- The state is divided into 4,938 3x3 mile blocks. Make sure that your checklists do not cross block boundaries. If your checklist is a traveling checklist, start a new checklist at the boundary.
- Principal Atlasers are assigned to some blocks to help ensure that block coverage goals are met. You do not have to sign up as a Principal Atlaser to participate. See the Atlas Map Tool for block maps and to sign up as a Principal Atlaser.

KEEP CHECKLISTS SHORT

- Checklists should be kept to 1 mile and 1 hour when possible. This provides more accurate information on the location of birds. Be careful when using eBird hotspots, as many are close to block boundaries. Personal locations at the exact location of your checklist are preferred.

AIM FOR COMPLETE CHECKLISTS

- Report and count (or estimate) *all* species you were able to identify by sight or sound. Incidental checklists are valuable too, if you see something interesting at a time when you can't submit a complete checklist.

BREEDING SURVEYS

- Use breeding codes for breeding birds! Slowing down to observe and document breeding behavior provides a much richer data set for conservation and management of populations. Take time to learn the meaning of each code.
- Don't use breeding codes for non-breeding birds. Use the Breeding Guidelines Chart to know when to assign codes. All codes (possible, probable, confirmed) can be used during green (B) weeks for each species, whereas only probably and confirmed codes should be used during yellow (E) weeks. Confirmed codes can be used any time those behaviors are observed.
- Breeding birds can be documented in all months in Pennsylvania. However, most breeding activity occurs from April through August and the peak months for documenting breeding birds are June and July.

WINTER SURVEYS

- Collect data on wintering birds from December 1 – February 28.
- See the Winter Atlas Handbook for more information.

ADD COMMENTS

- Add comments to your checklists to help data reviewers interpret sightings and behaviors encountered. Audio recordings and photos are always welcome, especially to help confirm species that are flagged rare. Comments are especially welcome for Priority Species.

ATLAS ETHICALLY

- Please read the atlas Code of Ethics.
- At all times, minimize disturbance to nesting birds and respect people and property.
- Do not rely on Merlin for species identification - always verify Merlin's suggestions for yourself.

HAVE FUN!

- Atlasing is a lot of fun, whether you are birding in your backyard or exploring the state! Enjoy yourself, support other birders, and know that you are contributing to bird conservation in Pennsylvania.

LAND ACKNOWLEDGMENT

Pennsylvania comprises ancestral homelands of Erie, Haudenosaunee, Lenape, Monongahela, Shawnee, Susquehannock, and Wahzhazhe Nations. We acknowledge these people, their histories, and their relationships with the land, birds, and other wildlife living here. We are grateful for their responsible stewardship of the land and its resources.

FUNDING

The Pennsylvania Bird Atlas 3 (PBA3) is a joint project of the Pennsylvania Game Commission (PGC) and Hawk Mountain Sanctuary. Major funding for the PBA3 comes from State Wildlife Grants administered by the PGC. Institutional support comes from Hawk Mountain. Essential in-kind and other support has been provided by Cornell Laboratory of Ornithology, Pennsylvania Society for Ornithology, and the Pennsylvania Audubon Council.

PENNSYLVANIA GAME COMMISSION

For more than 100 years, the Game Commission has managed the Commonwealth's wildlife resources for all Pennsylvanians. Through management, monitoring, restoration, and scientific research, the agency oversees more than 1.5 million acres of state game lands for wildlife habitat. To combat species loss, the agency helps prioritize and coordinate recovery actions for the most rapidly declining species in our forests, grasslands, and wetlands.

HAWK MOUNTAIN SANCTUARY

In 1934, visionary conservationist Rosalie Edge founded Hawk Mountain Sanctuary as the world's first refuge for birds of prey. From this fledgling sanctuary launched the first, longest, and most consecutive count of migratory raptors, and with it, the field of raptor migration science. Hawk Mountain's work has inspired hundreds of raptor count site globally, set forth protocols and study methods used today by raptor scientists, and has trained more than 500 up-and-coming conservationists from 76 countries on six continents. The non-profit Hawk Mountain Sanctuary operates its 2,400-acre Sanctuary as an eco-

tourism destination to connect people with the spectacle of raptor migration and the beauty and importance of the globally important mega-greenway and migration thoroughfare, the Kittatinny Ridge, a climate-resilient conservation landscape.

ACKNOWLEDGMENTS

An expert group of birders and researchers from across the Commonwealth came together to serve as an Advisory Group which has thoughtfully directed the PBA3. In particular, Andy Wilson and Dan Brauning, veterans of Pennsylvania's previous breeding bird atlases, along with Sean Murphy and Laurie Goodrich, have been instrumental in the planning and implementation of the PBA3. Bob Mulvihill provided a great deal of wise advice, and access to documents from the 2nd Pennsylvania Bird Atlas. All members of the Pennsylvania Ornithological Technical Committee provided advice and ideas, and the Pennsylvania Society for Ornithology, especially Deb and Greg Grove, and Frank Haas, helped distribute a survey to potential atlas volunteers. Katie Weigle and Laura Runyan in the Gettysburg College Grants Office are thanked for efficiently dealing with administration of grants.

ATLAS ADVISORY GROUP

- Dan Brauning, Retired, Pennsylvania Game Commission (PGC)
- Margaret Brittingham, Retired, Pennsylvania State University
- Vern Gauthier, Pennsylvania Society for Ornithology (PSO)
- Laurie Goodrich, Hawk Mountain Sanctuary
- Deb Grove, PSO
- Greg Grove, PSO
- Chris Kemmerer, Department of Conservation and Natural Resources' Bureau of State Parks
- Annie Lindsay, Powdermill Nature Reserve
- Holly Merker, eBird, PSO
- Bob Mulvihill, National Aviary
- Ron Mumme, Allegheny College
- Sean Murphy, PGC
- Scott Parkhill, Audubon Mid-Atlantic
- Sarah Sargent, Erie Bird Observatory
- Andy Wilson, Gettysburg College
- David Yeany, Western Pennsylvania Conservancy

We have benefited immensely from the advice, support, and materials from personnel involved in ongoing and recently completed Atlas efforts in other states, including:

- Gabriel Foley (Maryland & Washington, D.C. Breeding Bird Atlas 3)
- Adrienne Leppold and Glen Mittelhauser (Maine Bird Atlas)
- Julie Hart and Ian Davies (New York Breeding Bird Atlas III)
- Scott Anderson (North Carolina Bird Atlas)
- Ashley Peele and Scott Klopfer (Virginia Breeding Bird Atlas 2)
- Nich Anich (Wisconsin Breeding Bird Atlas II)

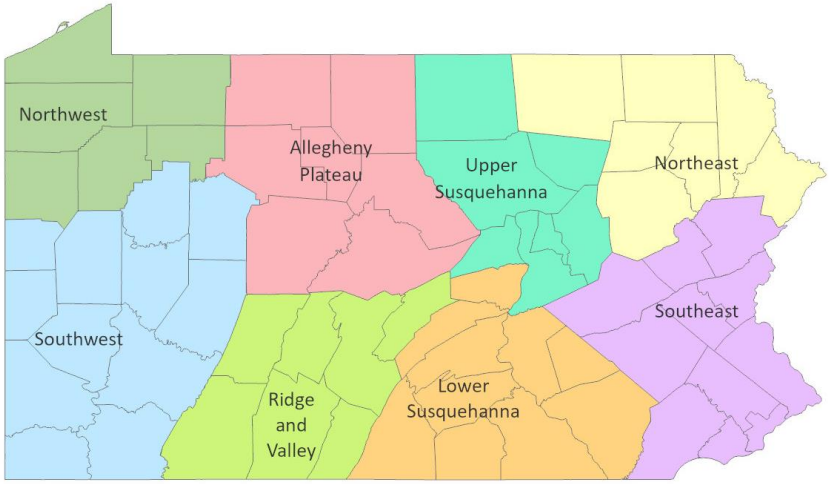
Most importantly, the PBA3 is possible only with the support and participation of thousands of dedicated birders across Pennsylvania. Our sincere thanks go in advance to these hard-working and passionate individuals who will contribute data to the PBA3.

CONTACT US

We're here to help!

- Reach the PBA3 team at: pabirdatlas@hawkmountain.org
- Regional email addresses are provided below. Please refer to ebird.org/atlaspa/about/atlas-team for the most up-to-date contact information Regional and County Coordinators.

PBA3 Regions



REGIONAL COORDINATION

- Northwest – PBA3.Northwest@gmail.com
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- Ridge and Valley – dsg4@psu.edu *and* gwg2@psu.edu
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- Lower Susquehanna – PBA3.LowerSusquehanna@gmail.com
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INTRODUCTION

Welcome to the Pennsylvania Bird Atlas 3 (PBA3)! This guide provides instructions on how to collect and submit bird observations for the PBA3 and additional information about the project. Bird atlases have been conducted worldwide to map the distribution, and often abundance, of species over a large geographic area. They follow a standardized methodology and are intended to be repeated at 20-year intervals. Atlas data are an important conservation tool. Climate change, land use change and development, and expansion of invasive species continue to have significant effects on birds and other wildlife and natural resources in Pennsylvania. Data generated by atlases provide information that is critical for designating species of conservation concern as well as informing conservation and management actions, helping ensure the future of Pennsylvania birds.

In the U.S., Pennsylvania was one of the earliest adopters of state-wide atlasing, with the First Atlas of Breeding Birds taking place in the 1980s, followed by the Second Atlas in the early 2000s. Both efforts were met with great success. During the first Atlas, 2,050 birders contributed 83,000 hours in the field resulting in 318,660 net records across all 4,928 blocks (the total number of blocks included then). A total of 210 species were observed during the breeding season, 187 of which were considered breeders during the Atlas period and 180 of which were 'Confirmed.' For the second Atlas, 1,900 birders contributed 110,000 hours in the field and contributed 854,773 records across all 4,938 blocks. A total of 218 species were observed, 190 of which were considered breeders during the Atlas period and 187 of which were 'Confirmed.'

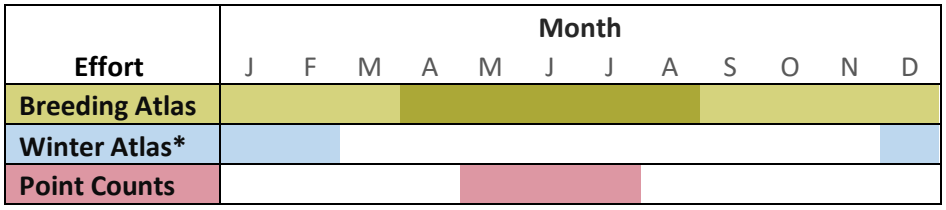
A novel feature of the Second Atlas was the use of point count surveys, from which density distributions and abundance estimates were produced for 115 of the 190 breeding species. The Second Atlas documented major range expansions in a number of species, including Bald Eagle, Peregrine Falcon, and Clay-colored Sparrow, but also dramatic declines in species such as Northern Bobwhite, Common Nighthawk, and Summer Tanager.

Just like in the First and Second Atlases, the PBA3 will attempt to document all the breeding bird species of Pennsylvania, confirm as many of them as possible, produce relative abundance estimates, and update range maps to look for evidence of population changes and distributional changes. But the PBA3 is not only about the birds of Pennsylvania! We hope that bird enthusiasts across Pennsylvania and beyond will feel welcome to participate in this great community science effort. The PBA3 relies not only on the expertise and knowledge of time-tested birders who have been counting birds at favorite hotspots for decades, but also on the curiosity of younger and newer birders who may be just learning to identify birds in their backyards or neighborhood parks. Atlasing goes beyond keeping a list of observed species and invites birders to slow down and explore bird behavior. By taking part in the PBA3, you will grow your birding skills and knowledge of bird life history, and hopefully feel a sense of place with the birds and natural communities of Pennsylvania. We also hope that you will feel a connection with other birders, all working together to paint a picture of the birds across the plateaus, ridges and valleys, piedmont, and coastal plain that form our beautiful state.

OBJECTIVES

- Produce results that can be compared to previous Pennsylvania bird atlases.
- Provide data suitable for status updates and conservation of bird species and their habitats.
- Document all bird species breeding in Pennsylvania and estimate their distributions.
- Estimate relative abundance for most of the bird species breeding in Pennsylvania.
- Achieve uniform coverage of the state by observers.
- Ensure that results are accessible to decision makers and, when appropriate, the public, through publication online, in a major database, and in book format.
- Make participation in the PBA3 accessible and inclusive.
- Raise awareness of birds in Pennsylvania, factors driving changes in their populations, and efforts to conserve them.
- Encourage collaborations with relevant organizations, government departments, and community groups.

ATLAS TIMELINE



BREEDING ATLAS
The PBA3 Breeding Atlas will take place from January 1, 2024 through the end of 2028. Surveys for breeding birds can occur in all months of the year, although there are only a few species breeding very early or very late in the year. The majority of atlasing will take place from April to August, as this is when most breeding activity occurs in Pennsylvania.

WINTER ATLAS
The PBA3 will be the first of Pennsylvania atlases to include a Winter Atlas. This is an important component of the PBA3 because winter is a critical time period for birds, but an under-surveyed portion of the year. Winter Atlas surveys will take place from December to February of each winter, beginning in December 2024 and culminating at the end of February 2029. For more information about the Winter Atlas, see the (forthcoming) PBA3 Winter Atlas Handbook.

POINT COUNTS
A point count is a tally of all birds detected by an observer located at a fixed position during a specified period of time. Data collected in point count surveys are used to estimate relative abundance of bird species. As in the Second Pennsylvania Atlas, point counts will be conducted by a trained survey crew from late May to mid-July during each year of the Atlas.

An advancement of the PBA3 will be volunteer-conducted point counts. For these surveys, a subset of experienced Atlas volunteers will complete four point counts in each block over the duration of the PBA3. For more information on volunteer point counts, reach out to your County Coordinator.

ATLAS BLOCK SYSTEM

Example quadrant consisting of six blocks. The southeast (SE) block highlighted in yellow is a priority block.

The PBA3 will use the same 'block' system as the two previous atlases. Pennsylvania is gridded into 7.5 minute (1:24,000) U.S. Geological Survey quadrangles (quads). Each quad is subdivided into 6 blocks for a total of 4,938 blocks across the state. Blocks are each roughly 3 x 3 miles, totaling about 9 mi^2 (23 km^2), except for blocks along borders of the state, which may be irregularly shaped and sized. Each block is given the name of the quad it is located in followed by a 2-letter code denoting the position of the block within the quad: northwest (NW), northeast (NE), center-west (CW), center-east (CE), southwest (SW), or southeast (SE). Your objective as an Atlaser is to locate, identify, count, and confirm breeding for as many species as possible in a block. By birding in all 4,938 blocks in Pennsylvania, we can detect shifts in species distributions between atlases. All southeast (SE) blocks are designated as 'Priority' blocks. We aim to complete surveys in all blocks for the Breeding Atlas, but we will prioritize these priority blocks during the Winter Atlas.

BLOCK MAPS

It is important that all observations in a birding checklist occur within a single block. To help you know which block you are in while you are birding (and where block boundaries are) we offer maps in several formats:

1. ***eBird Mobile App***
   Using the Pennsylvania Bird Atlas portal in the eBird app allows you to see the block you are birding in, your location in the block, and block boundaries. If you experience any difficulties with this or other features while using the eBird app, the most effective solution is to delete and reinstall the app.

2. ***PDF Maps***
   Static PDF maps can be downloaded from the Atlas Map Tool used to sign up for blocks. We provide two maps for each block: one with roads and one with satellite imagery. Once you download the maps of interest to you, you can print them or store them on your mobile device for reference in the field.

   These PDF maps are also georeferenced meaning that they can be loaded into mobile GPS applications such as Avenza, allowing you to see your location plotted directly on the block map, even when you do not have a cell signal or internet access.

3. ***Digital Maps***
   Block boundaries in digital format can be downloaded here. These kmz files can be loaded into Google Earth (a free program) or your favorite GPS app.

4. ***County Block Maps***
   Maps showing the blocks in each of Pennsylvania's 67 counties can be found here.

SIGN UP FOR A BLOCK

If you are excited about atlasing a particular area and want to ensure it is adequately covered, you can sign up to be the Principal Atlaser for that block. By signing up for a block, you are agreeing to:

- Spend around 20 hours surveying the block to confirm breeding birds, mostly during spring and summer.
- Spend around 2 hours surveying at night.
- Regularly submit your data through the Pennsylvania Bird Atlas portal in eBird.
- Provide additional documentation for rare or priority species.
- Monitor block progress and inform your County Coordinator when you believe these criteria have been met.

Signing up as Principal Atlaser does not mean that others cannot atlas and report birds in that block. Conversely, it is not required to sign up for a block to participate in the atlas. We encourage experienced birders to sign up for multiple blocks (up to 5 in a region, and 10 total at a time) in the same year, as long as they intend to begin birding those blocks in that year. If you are a beginner birder and not yet as comfortable with your ability to identify birds, consider joining a more experienced partner or group in the first year to help you gain experience before signing up for a block. **To sign up as Principal Atlaser for a block, go to the Atlas Map Tool** (https://arcg.is/1H40Xm0) **and use the interactive map to find an available block and submit a request form.** Block sign-up will be open as long as there are available blocks.

CHECKLIST GUIDELINES

We have established a list of guidelines to help ensure that the observations you collect can be used by the PBA3. The more Atlasers follow this list, the more we can accomplish with the data!

- Checklists **MUST** be submitted to the Pennsylvania Bird Atlas portal on your mobile device or at ebird.org/atlaspa/submit. If you do not have access to eBird you may submit paper field forms.
- Provide a count or estimate of the number of individuals reported instead of 'X.'
- Keep separate checklists for different habitat patches within a block.
- Keep your traveling distance short – **1 mile or less.**
- Keep duration of checklists short – **1 hour or less.**
- Take care to stay within boundaries of a single block for each checklist. eBird hotspots frequently cover multiple blocks and therefore should often not be used when you select your location. Instead, create separate checklists for each block and assign a specific personal location to each checklist.

- Slow down, watch bird behaviors, and use breeding codes (Appendix A)! You may also submit observations that do not include breeding codes in order to submit a complete checklist in eBird, but only observations with breeding codes will ultimately be used by the Atlas.

BLOCK COMPLETION GUIDELINES

To uniformly cover the state, we must put enough effort into surveying each block that we are reasonably certain we have observed most of the species breeding there, and then move on to other blocks. Principal Atlasers should use the following guidelines to monitor block completion, and consult with the County Coordinator to determine if a block has been adequately surveyed. Once a block is designated complete, birders are encouraged to move on to incomplete blocks.

BREEDING ATLAS BLOCK COMPLETION TARGETS

1. 70+ species* with breeding codes (Appendix A)
    a. Minimum 25% Confirmed
    b. Maximum 25% Possible
    c. Remaining 50% Probable (or more may be Confirmed)
2. Minimum of 20 hours of Atlasing effort between April and August (over duration of the Atlas)
3. Minimum of 3 visits spread out across the breeding season (e.g., April, June, July)
4. Include checklists in all accessible habitat types (e.g., forest, grassland, agricultural fields, forested wetlands, marshes, urban habitats)
5. Minimum of 2 hours of nocturnal atlasing (preferably over 2 visits)

*This number will vary significantly across blocks and may be as high as 95+ species in some blocks or fewer in smaller border blocks. The species lists in the Atlas Map Tool provide the reported species for each block in the previous Atlases, and are helpful for determining which, and approximately how many, species to expect for a given block in the PBA3.

A running total of the species, breeding codes, and effort reported for each block during the PBA3 can be found at https://ebird.org/atlaspa/effortmap. Special effort should be made to Confirm rare, locally unexpected, and priority species (Appendix B).

We want to encourage every birder to contribute at whatever level you are comfortable with. A block's Principal Atlaser will assess block coverage with assistance from the County Coordinator. If you are primarily birding in your yard or neighborhood, you don't need to worry about block coverage goals, and your contributions may run well over 20 hours of birding without a block being considered 'Complete.' **All 5 coverage targets need to be assessed before a block will be designated complete.**

SURVEY METHODS

Let's get started! Anyone with an interest in birds can contribute records to the Atlas, whether you spend many hours surveying or only report a single nest you discovered in your backyard. You can also survey in any block, whether you are the Principal Atlaser or not. Remember, all 4,938 blocks need to be surveyed for the PBA3, so all types of contributions and birders are needed! **However, all observations must be entered into eBird through the Pennsylvania Bird Atlas portal.** Atlasing is much

like regular birding, except that instead of tallying as many species as possible while birding, you are watching for and recording any individual bird behaviors that are evidence of breeding in a block.

Accuracy of species identification is of utmost importance for all data submitted for the PBA3. Tentative identifications should NOT be recorded. It is better to miss a record than to report a false identification. It may be helpful to make a note to yourself about a tentative identification and return to the location later to attempt to verify it.

COMPLETE CHECKLISTS

Whenever possible, try to submit complete checklists. A complete checklist indicates that birding was your primary purpose and that you are reporting all birds that you were able to identify (it's ok if there is a bird you couldn't identify, as long as you aren't intentionally leaving identified birds off the checklist).

INCIDENTAL OBSERVATIONS

Incidental observations are those made while doing something other than birding, such as driving, hiking, or gardening. These observations are an especially important source of breeding bird data for species or habitats that may otherwise receive less survey coverage and should still be submitted (with the precise location of the observed bird) via the Pennsylvania Bird Atlas eBird portal.

NOCTURNAL SURVEYS

Nocturnal surveys are important for recording crepuscular (active at twilight or just before dawn) and nocturnal (active at night) species like nightjars, owls, rails, and woodcock. **Nocturnal checklists in eBird must start at least 20 minutes after sunset and at least 40 minutes before sunrise.** Find your local sunset and sunrise times at www.suncalc.org. We recommend making at least two nocturnal visits of 1+ hour each per block, once in March or April to detect owls and woodcock, and again in May or June for nightjars and rails.

Note: If you do a nocturnal survey but don't detect any birds, you should still submit this checklist (with no species reported) to count toward effort in the block. It is helpful to add a note in the comments indicating that no species were detected to indicate that the checklist was not submitted in error.

BREEDING CODES

Breeding behaviors (Appendix A; read more here) are coded in eBird and increase in order of the strength of the evidence. For example, a singing male bird (code S) could be breeding, but many birds sing even while migrating, and he might not even have a mate. But if you see a male-female pair (code P), you know they are probably breeding. And if you see that pair feeding chicks in a nest (code NY), you have confirmed that species in your block.

Because the use of eBird facilitates the collection of data throughout the duration of the atlas and these data are associated with much more precise locations than in previous atlases, **it is useful to code each species you see, each time you see it, and to submit complete checklists whenever possible.** For example, one Red-winged Blackbird nest found in a block means that Red-winged Blackbird is confirmed for that block for the entire five years of the Atlas. While you would no longer need to specifically seek out any additional Red-winged Blackbirds in that block, we strongly encourage you to continue recording observations and breeding behaviors of any additional Red-winged Blackbirds you observe in the block. Among other uses, these data will help show changes in reproductive phenology (i.e., timing of breeding).

BREEDING CODES	
Observed	
	Observed (no code)
F	Flyover
Possible	
H	In Appropriate Habitat
S	Singing Bird
Probable	
S7	Singing Birds Present 7+ Days
M7	Multiple (7+) Singing Birds
P	Pair in Suitable Habitat
T	Territorial Defense
C	Courtship, Display, or Copulation
N	Visiting Probable Nest Site
A	Agitated Behavior
B	Wren/Woodpecker Nest Building
Confirmed	
PE	Physiological Evidence
CN	Carrying Nesting Material
DD	Distraction Display
UN	Used Nest
ON	Occupied Nest
FL	Recently Fledged Young
CF	Carrying Food
FY	Feeding Young
FS	Carrying Fecal Sac
NE	Nest with Eggs
NY	Nest with Young

Remember, the PBA3 links a bird's behavior to its location, so it's important to only record breeding evidence if a bird is likely to be breeding in your block. For example, because Turkey Vultures travel a considerable distance to forage, a vulture observed soaring over a forest might be nesting several miles away and outside of the block. Recording it as in appropriate habitat (code H) would indicate possible breeding but would be misleading for that block – even if the bird itself is possibly breeding. The "Flyover" code is more appropriate in this case.

Note: If you observe a species in a neighboring block, you should still report the observation on your checklist in order to submit a complete checklist. However, if you also observe a breeding behavior, the appropriate breeding code should be submitted in a separate checklist with the location set to that neighboring block. For example, you're atlasing near the edge of block A when you see an Osprey on a nest in neighboring block B. You should report the Osprey (but no breeding code) in your block A checklist. When you are finished with that checklist, submit a separate incidental checklist with location selected in block B to report the Osprey and appropriate breeding code (in this example, ON for Occupied Nest).

TIPS FOR ASSIGNING BREEDING CODES

1. Know the code definitions and when it is appropriate to use them (Appendix A).
2. Record appropriate codes every time you observe them.
3. If you are unsure about a code, use your best judgement to select the most appropriate one and describe what you observed in the species comment box.

WHEN TO SURVEY (BREEDING GUIDELINES CHART)

An important aspect of atlasing is determining how to code a bird seen or heard singing in appropriate habitat during the period of overlap when individuals of the species could be either migrating or breeding. This is especially true for species that sing during migration. For example, is that Yellow Warbler singing on May 10 on a breeding territory or still in migration?

The goal here is to determine if a breeding code is appropriate for the bird, and if so, which code. We have compiled a **Breeding Guidelines Chart** to help (available as a PDF and Excel Spreadsheet). This document is intended as a general guide to when species are expected to be migrants or nonbreeders in your area, or when it's reasonable to assume a bird you encounter is on a breeding territory. Additionally, this chart can help you identify effective time periods to focus your efforts. **Take note of priority species, which are labeled with an asterisk on the Breeding Guidelines Chart. Special efforts should be taken to detect and confirm breeding for these species (Appendix B).**

SAMPLE SECTION OF BREEDING GUIDELINES CHART

	Jan				Feb				Mar				Apr				May				Jun				Jul				Aug				Sep				Oct				Nov				Dec			
Common Name	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
White-breasted Nuthatch	N	N	N	N	N	N	N	N	N	N	N	E	E	E	E	E	E	B	B	B	B	B	B	B	B	B	B	B	B	E	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Brown Creeper	N	N	N	N	N	N	N	N	N	N	M	M	M	M	M	E	E	E	B	B	B	B	B	B	B	B	B	B	B	E	E	M	M	M	M	M	M	M	M	M	M	N	N	N	N	N	N	N
Blue-gray Gnatcatcher												M	M	M	M	E	E	E	B	B	B	B	B	B	B	B	B	E	E	E	M	M	M	M	M												
Carolina Wren	N	N	N	N	N	N	N	N	N	N	N	E	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	E	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

INTERPRETING THE BREEDING GUIDELINES CHART

- ***Nonbreeding (N).*** This indicates birds present in what is likely not their breeding season.

- ***Migrant (M).*** This is the expected prime migration window for this species. You cannot safely assume a bird in suitable habitat is a breeder. In practice, for some species, this code also denotes a post-breeding period where birds may not actually be migrating, but observations of breeding activity are no longer likely.

- ***Either (E).*** This is a window of overlap between breeding and migration or between breeding and nonbreeding – it is possible that birds are on a breeding territory; however, migrants are still moving through or birds may otherwise not be on their breeding territory. **Probable and Confirmed breeding codes can be recorded during these weeks. Take note of singing birds in suitable habitat but do not consider them as Possible breeders until later visits.**

- ***Breeding Only (B)*.*** It is generally reasonable to assume birds present during this time window are breeders, and all codes can generally be used during this time. This period is also known as 'Safe Dates' (i.e., when it is safe to use all codes for a species).

***There are exceptions when observed birds should NOT be assumed to be breeding even during 'Breeding' weeks):**

- Extremely rare birds (additional efforts should be taken to confirm breeding for these species, when possible)
- Rare singing songbirds not always likely to pair
- Colonial waterbirds prone to roaming (ex: Double-crested Cormorant)
- Oversummering terns and gulls
- Shorebirds (many Arctic-breeding shorebirds pass through in June and July)
- Species that wander in summer, early migrants (ex: Tennessee Warbler, Philadelphia Vireo)

These guidelines are designed to provide a general impression of the typical phenology for each species. However, your field observations take precedence over this chart – if you see a **Confirmed** breeding behavior, record it regardless of whether it is in a 'Breeding' week or not! The weaker evidence breeding codes – birds in suitable habitat and singing males – are trickier to deal with, and where we hope this chart will provide the most guidance. **These codes (H, S) should only be used during the weeks marked as 'Breeding Only'. Outside of these weeks, singing males should be reported without a breeding code.**

Remember that an early or late spring can affect when migrants move through and when birds settle on territories. In spring, birds may show up in the southern PA a couple weeks before they arrive in the northern PA, depending on the weather. Repeat visits to your block(s) from migration into the breeding season often provide the local knowledge necessary to distinguish migrant from resident birds.

June is the primary month for building a species list for a block because most birds are on territory and very vocal. June, July, and August are the optimal months for recording birds in the Probable and Confirmed categories. Although most singing activity has decreased by this time, noisy fledglings accompany parents or beg for food in a nest, and parent birds are more likely to be seen carrying food for young. Also, species that produce multiple broods are renesting at this time.

Young birds begin to disperse after the parents stop feeding them, and once flying well may disperse from the block they originated from. This can be 2-3 weeks after fledging. To be recorded as code FL (recently fledged young), young birds must still be in full juvenal plumage (i.e., have not molted into adult plumage) and/or be observed receiving direct parental care (typically feeding).

DATA ENTRY

Since 2015, eBird, the global database of birding observations, has been used widely as the method of recording and compiling data for atlases. All data for the PBA3 should be submitted through eBird using the Pennsylvania Bird Atlas project, either on your mobile device or on the website. **As a general rule, you may enter all birding data into the Atlas project as long as you are birding within Pennsylvania and you remain with a single block for each checklist.** All data you enter this way will still enter in your single eBird account, but by submitting data via the Atlas project you are indicating that you are following PBA3 protocols. This is important for ensuring the quality of the data we collect. Don't know how to eBird? See here for help getting started. You can also inquire with your County and Regional Coordinators about eBird training opportunities.

1. **eBIRD MOBILE APP**
   The simplest way to submit data is to use the mobile eBird app and enter your data using your smartphone while you are in the field. If you are birding in an area without cell coverage, you can still enter your observations in the mobile app, but you will select your location and submit the checklist after returning to cell coverage. To begin submitting data from your phone, you will need to change the project in the app settings (Appendix C).

2. **eBIRD WEBSITE**
   You may also choose to take written records of your observations in the field and later enter on a computer at ebird.org/atlaspa/submit. We provide field forms to print and use for data recording in the field.

3. **PAPER FIELD FORMS**
   For birders without computer access or who otherwise do not use eBird, you may either:
   - Mail completed forms to:
     PA Bird Atlas, 414 Forest Resources Building, University Park, PA 16802
   - Scan forms and email to pabirdatlas@hawkmountain.org.
   - Return forms to your County Coordinator.

   Note: Only field forms that have NOT been entered into eBird need to be sent to us.

If you do record your observations on paper, please make sure that all your information is legible! All observations should include:

- Observer and contact information
- Date
- Observation type (typically Traveling, Stationary, or Incidental)
- Start time
- Survey duration
- Precise location* (UTM location, latitude/longitude, map with location noted, or a detailed description to exact location within the block where breeding behavior was documented)
- Travel distance (i.e., distance walked or driven during survey)
- For each species documented:
  - Species identification
  - Count of individuals observed
  - Highest breeding code observed for each species

*If you are using your smartphone in the field, you can determine a precise location by opening your mapping app and then touching and holding at your location on the map to drop a pin. If using Google Maps, the latitude/longitude coordinates will appear in the search bar. If using Apple Maps, the coordinates will appear in the 'Marked Location' tab.

STRATEGIES FOR EFFECTIVE ATLASING

Any level of birding is welcome! However, if you do want to contribute as much data as possible, here are some helpful tips.

- Use eBird to find blocks and regions that are lacking in coverage.
- If you are a Principal Atlaser or are otherwise planning to spend a significant amount of time birding in a block, study block maps ahead of time. Identify habitat patches to survey.
- Review the Breeding Guidelines Chart and plan optimal times to visit a block based on the species you are trying to confirm.
- Prioritize detecting and confirming breeding for priority species (Appendix B).
- Look for gaps in block checklists – for example, have you searched for early or late breeders, nocturnal/crepuscular species, and common but frequently overlooked species like Rock Pigeons, European Starlings, and House Sparrows?
- Repeated visits give you the opportunity to "upgrade" breeding codes to represent stronger breeding evidence. For example, you could upgrade from an 'S' – singing bird (Possible breeding) to an 'S7' – singing bird present 7+ days (Probable breeding) by visiting the same location a week later. Of course, visits in late June and early July provide many opportunities to add breeding Confirmations!

ATLAS CODE OF ETHICS

Practice and promote respectful, enjoyable, and thoughtful birding!

Based on the American Birding Association's Code of Birding Ethics. Also see Audubon's Guide to Ethical Bird Photography for further guidance for birders.

1. **Respect and promote birds and their environment.**
    a. Avoid stressing birds or exposing them to danger. While observing breeding behaviors, be careful not to stress the birds. Minimize disturbance to active nests, nesting colonies, roosts, display sites, and feeding sites.
    b. Limit the use of recordings and other audio methods of attracting birds, particularly in heavily birded areas and with rare, threatened, or endangered species. Always exercise caution and restraint when photographing, recording, or otherwise approaching birds.
    c. Minimize habitat disturbance. When possible, consider the benefits of staying on trails, preserving snags, and similar practices. Follow the 7 leave-no-trace principles.

2. **Respect and promote the birding community and its individual members.**
    a. Bird and report your data with honesty and integrity.
    b. Respect the interests, rights, and skill levels of fellow birders, as well as people participating in other outdoor activities.
    c. Share your bird observations freely, except for sensitive species, provided such reporting would not violate other sections of this Code.
    d. Promote these values among your birding peers.

3. **Respect and promote the law and the rights of others.**
    a. Never enter private property without the landowner's permission. Respect the interests of others and interact positively with people living in the area where you are birding.
    b. Follow all laws, rules, and regulations governing activities at your birding locations.

4. **Responding to inappropriate behavior:**
    a. Speak to instances of perceived unethical birding behavior with sensitivity and respect, in a positive manner, keeping in mind that perspectives vary. Take opportunities to teach by example and to introduce more people to this Code.
    b. If a questionable behavior persists or cannot be resolved, report your concern to your County Coordinator, or if necessary, to the appropriate Regional Coordinator or Project Director.

USE OF MERLIN APP

The use of Cornell Lab of Ornithology's Merlin app (https://merlin.allaboutbirds.org/) can be a useful birding tool. However, with use of Merlin comes an increased risk of birders submitting incorrect identifications. Remember, Merlin does not identify species, but instead offers suggestions based on artificial intelligence. Please use the following guidelines if using Merlin:

- **Always rely first on your own eyes and ears.** When Merlin suggests a species based on audio, try to find the bird and identify it visually. Consider if the species makes sense for the habitat and time of year. You must confirm identifications independently to submit them to the Atlas!
- **Set your location.** Merlin works best with an accurate location.
- **If possible, upload your Merlin audio recording to your eBird checklist.** Instructions can be found here.
- If you are unable to submit a quality audio recording, please **describe how you made the identification in the species comment box**. Describe the sound you heard (high-pitched, squeaky, two notes, similar to Red-eyed Vireo but raspier, etc.). If you saw the bird making the sound, describe what it looked like and its behavior. "Identified by Merlin" is not a sufficient response here – we want to know how YOU identified the bird!
- Rare or unusual species will require supporting documentation to be included in the Atlas data.

FIELD SAFETY

- Please be safe in the field!
- Let someone know where you're going and when you expect to return.
- Check the weather forecast and radar before heading out. In addition to being a good safety precaution, this can prevent you wasting effort on a birding trip during bad weather.
- Carry food and water with you. Always have more water than you think you'll need.
- Store a first aid kid in your vehicle.
- Don't assume your cell phone will work in all locations. Download and print maps, directions, and emergency phone numbers.
- Protect yourself from ticks and mosquitos. As needed, wear long sleeves and pants, tuck pants into socks, use a mosquito head-net, and use insect repellents containing 20-30% DEET. Wash and dry all clothing after returning from the field (ticks cannot survive an hour in a hot dryer). PA Department of Health provides more information on ticks and tick-borne illnesses here.

APPENDIX A: BREEDING CODES

OBSERVED	
No code	**Observed** Species present but without evidence of breeding and outside of suitable nesting habitat. No code required. Any bird on a checklist in the Pennsylvania Bird Atlas eBird portal is automatically 'Observed.' • Shorebirds that normally breed in the Arctic • Gulls frequenting dumps, plowed fields, lawns, etc., throughout the summer • Marsh Wren singing from a dry, grassy field • Migrating individual in unsuitable habitat
F	**F – Flyover*** Birds flying high overhead or in direct flight. This code doesn't indicate breeding, therefore it only has 'Observed' meaning. Tree swallows foraging for insects are not considered a flyover because they are not in direct flight. • Turkey Vulture soaring overhead • Ring-billed Gull flying above a forest • Great Blue Heron in flight • Flock of Cedar Waxwings flying by

POSSIBLE	
H	**H – In Appropriate Habitat** Adult in suitable nesting habitat during its breeding season. Important to note both the habitat component and the breeding season component (which can be very different for residents vs migrants). • Virginia Rail walking in a marsh • Scarlet Tanager feeding in a deciduous forest • Bobolink in an abandoned field • Ducks in adult plumage on a lake with suitable nesting habitat • Green Heron or bitterns (non-colonial nesting species) observed in appropriate nesting habitat • Mourning Dove at a backyard feeder with suitable nesting trees nearby • Black-capped Chickadee giving 'chick-a-dee-dee' call (which is a call, not a song) • Vulture perched in a tree or on a pole, or on the ground
S	**S – Singing Bird** Used when you encounter any singing bird during their breeding season. This code is also used for non-songbirds giving their primary vocalization, such as woodpecker drumming, owl calls, rail vocalizations, and woodcock peenting. If a bird is heard singing at the same place on a second trip during the breeding season, it may qualify as S7. • Any bird singing (or giving vocalization that is "song" for the species) • Great Horned Owl hooting • Any woodpecker drumming

PROBABLE	
S7	**S7 – Singing Bird Present 7+ Days** Singing bird present at same location on at least two occasions 7 or more days apart during a single breeding season. Do not use if you observed the species singing a week earlier elsewhere in your block. This behavior presumes a permanent territory. Initial observation should only be made after migration ceases. • Pine Warbler singing from same group of pines two Saturdays in a row • Barred Owl calling for over a week from the same patch of forest
M	**M – Multiple (7+) Singing Birds** Multiple (7 or more) singing or territorial birds of a species detected within a block within a single breeding season. If you are submitting separate checklists for different locations and habitats in your block (as recommended) and you don't have all 7 birds on a single checklist, use this code on the checklist where you reach a total of 7 birds and make a note in the comment field that you are including birds from other checklists in the block. • Rose-breasted Grosbeaks heard in 7 forest patches in a block in June and July • Eight Song Sparrows singing in a block in one day
P	**P – Pair in Suitable Habitat** Pair observed in suitable nesting habitat. Only use this code when you are fairly certain that a mated pair of has been observed. Look for behavioral cues to determine if you have a male-female pair, particularly in species where males and females look the same. • Male and female Scarlet Tanagers observed together several times in the same area but no nest is found • Two Mourning Doves sitting together on a branch, cooing and preening each other
T	**T – Territorial Defense** Permanent territory presumed through defense of breeding territory by fighting or chasing. While this is generally used for individuals of the same species, an interaction between members of different species may fall under this code when it appears to be territorial defense. Also see "A – Agitated Behavior." Because territoriality involves the defense of a fixed area, it may be useful to map locations of individuals to determine if they are defending the same general area when surveying the block on future visits. • Field Sparrow chasing another Field Sparrow in a grassy field • Two American Robins fighting in your backyard • Swamp Sparrow chasing a Marsh Wren
C	**C – Courtship, Display, or Copulation** Courtship behavior or copulation between a male and a female. Courtship behavior includes transfer of food, displays, and grooming between a pair of birds. • American Woodcock or Wilson's Snipe display flights • Ruffed Grouse drumming • Mourning Dove in "parachute" display flight
N	**N – Visiting Probable Nest Site** Repeated visits to a probable nest site. Especially useful for cavity nesters or for a shrub-nesting species that flies into the same thicket and disappears on several occasions. • Northern Cardinal flies into dense shrub and doesn't come out for several minutes • Black-capped Chickadee entering a tree cavity and not coming out for some time

A	**A – Agitated Behavior** Agitated behavior or anxiety calls from adults indicating a nest site or young in the vicinity. This code refers to a stronger reaction to intruders than those exhibited by "T – Territorial Defense," usually against brood parasites, nest predators, and humans. Do not use this code for agitation induced by "pishing" or playing recordings. This code also excludes mobbing behavior that species engage in year-round (e.g., mobbing an owl). • House Wren begins chattering loudly from a bush as you walk by • Common Yellowthroat scolding a Brown-headed Cowbird • Mixed flock of birds mobbing a Blue Jay • Red-winged Blackbird or Eastern Kingbird attacking a Great Blue Heron
B	**B – Wren/Woodpecker Nest Building** Nest-building by wrens, which may build "dummy" nests before the female selects a nest, or excavation of cavities by woodpeckers, which often drill holes for roosting. • Male House Wren stuffing a nest box with sticks • Hairy Woodpeckers building a cavity in April

CONFIRMED	
PE	**PE – Physiological Evidence** Physiological evidence of breeding based on **a bird in the hand**. This code is used primarily by bird banders and includes evidence such as an incubation (brood) patch, cloacal protuberance, or an egg in the oviduct.
CN	**CN – Carrying Nesting Material** Adult carrying nesting material to an unseen nest, such as sticks, grass, mud, and cobwebs. For raptors, be sure the material is not simply incidental to prey capture/transport. For wrens, use code B. • Red-tailed Hawk breaking off sticks from a tree and carrying them away • Vesper Sparrow flying with a bill full of grass • Northern Parula collecting lichen and flying away with it • Barn Swallow collecting mud and flying off toward a barn
NB	**NB – Nest Building** Nest-building observed at the actual nest site (excluding wrens and woodpeckers). • Canada Goose moving reeds around and adding mud to build up its nest • Warbling Vireo weaving cobwebs into its nest
DD	**DD – Distraction Display** Distraction displays and injury feigning in attempt to draw intruder away from nest or young. • Killdeer doing broken-wing distraction display but no young seen • Ovenbird running about with wings fluttering • Ruffed Grouse using broken-wing display to protect her brood
UN	**UN – Used Nest** Used nest or eggshells found. Only use for unmistakable eggshells and nests that were used during the Atlas period. Add comments detailing how you identified the nest or eggshells. Do not collect the nest, but do take a photograph if possible. Enter '0' for count if no individuals of that species are observed during your visit. • Bald Eagle nest along the side of a river, with no eagles present displaying higher breeding behavior

	• Baltimore Oriole nest with no activity but the nest is still in good shape
ON	**ON – Occupied Nest** Occupied nest indicated by adult sitting in nest in incubation position, adult entering nest site and remaining, or exchange of incubation duties by the pair. This code is useful for nests high in trees, on cliffs, and in chimneys where the contents of the nest and incubating or brooding adult cannot be easily seen. • Wood Thrush seen on nest but nest too high to see contents • Canada Goose sitting on an elevated nest in a marsh • Osprey on a nest atop a nesting platform
FL	**FL – Recently Fledged and Precocial Young** Recently fledged or downy young still dependent upon adults and presumed incapable of extended flights from nest site. Look for retained downy feathers, a yellow gape, a short tail (shorter than the wings), clumsy flight and landings, and a bird incapable of feeding itself. Beware of family groups late in the breeding season which may still be interacting but are far from the breeding location. Young Brown-headed Cowbirds begging for food confirm both the cowbird and the host species. If you find a dead fledgling and don't see an adult of the same species, use a count of '0' and enter the FL code. • Canada Goose family with fuzzy goslings • Stubby-tailed juvenile Northern Cardinal incapable of sustained flight
CF	**CF – Carrying Food** Adult carrying food for young or incubating partner. Use special caution with corvids, raptors, terns, and other species that regularly carry food for courtship, caching, or other purposes. One of the best signs to look for is the repeated carrying food in the same direction. • Hermit Thrush with a bill stuffed full of insects • Yellow Warbler carrying a fat green caterpillar
FY	**FY – Feeding Young** Adult feeding young that have left the nest. This code does not confirm breeding for species that may move many miles from the nest site, such as raptors and terns. Use the NY code for nestlings being fed by an adult. • Eastern Bluebird feeding a begging juvenile in a tree near probably nest site • Black-capped Chickadee feeding chicks in a hemlock tree
FS	**FS – Carrying Fecal Sac** Adult carrying fecal sac or egg shell fragments. Many passerine adults keep their nests clean by carrying membranous, white fecal sacs and broken eggshells away from the nest. Note that only songbirds and woodpeckers produce fecal sacs and this code should only be applied to these groups of species. • Common Grackle flying out of a shrub with a white fecal sac • Carolina Wren carrying an eggshell out of its nest
NE	**NE – Nest with Eggs** Nest with eggs seen. Be careful not to disturb the vicinity of the nest. Confirm the species by waiting at a distance until adult returns. If no birds are seen, use the UN code. If a Brown-headed Cowbird egg is found in the nest, use code NE for both the cowbird and the host species, if no individual cowbirds were seen that day, enter a '0' in the Brown-headed Cowbird number field during data entry. • American Robin nest with blue eggs in low branches of an apple tree • Northern Cardinal nest with blotchy eggs in bushes outside your home

	**NY – Nest with Young** Nest with young seen or heard. Keep your distance so nestlings are not prematurely flushed from the nest. Include the nestlings in your species count. Presence of Brown-headed cowbird young confirms both the cowbird and the host species. • Eastern Phoebe or House Finch nestling under the eaves of a house • Young Osprey calling from a nest platform

APPENDIX B: DOCUMENTING PRIORITY AND SENSITIVE SPECIES

PRIORITY SPECIES

The Atlas provides a great opportunity to learn more about some of the rare, secretive, or high conservation priority bird species in the state and better inform management for these species.

If you observe a priority species, please:

1. Prioritize attempts to confirm breeding for the species in the block.
2. Provide additional information for the species in the species comments in your eBird checklist.
    - All priority species – Provide a specific location* of the bird and/or nest
    - You may also provide a brief description of the habitat, how you identified the bird, and details of nests (e.g., height above ground, species of tree/shrub, number of eggs/young present)
    - If possible, submit a photo or audio file
3. Colonial nesters – Provide the number of nests.

*If you have concerns about providing a precise location, follow the guidelines for Sensitive Species.

Note: If you find a species that is not included on the Breeding Guidelines Chart (i.e., a new or historical breeding species), please treat it as a priority species.

PRIORITY SPECIES

Blue-winged Teal	Least Bittern	Bank Swallow
American Black Duck	Great Blue Heron*	Purple Martin*
Green-winged Teal	Great Egret*	Sedge Wren
Pied-billed Grebe	Snowy Egret*	Marsh Wren
Common Nighthawk	Cattle Egret*	Bewick's Wren
Eastern Whip-poor-will	Black-crowned Night-heron*	Swainson's Thrush
King Rail	Yellow-crowned Night-heron*	Red Crossbill
Virginia Rail	Osprey	Pine Siskin
Sora	Northern Harrier	Clay-colored Sparrow
Common Gallinule	Sharp-shinned Hawk	White-throated Sparrow
American Coot	American Goshawk	Vesper Sparrow
Black Rail	Bald Eagle	Henslow's Sparrow
Sandhill Crane	Barn Owl	Yellow-breasted Chat
Piping Plover	Long-eared Owl	Golden-winged Warbler
Upland Sandpiper	Short-eared Owl	Prothonotary Warbler
Red Knot	Red-headed Woodpecker	Nashville Warbler
Wilson's Snipe	Merlin	Cerulean Warbler
Spotted Sandpiper	Peregrine Falcon	Blackpoll Warbler
Black Tern*	Yellow-bellied Flycatcher	Summer Tanager
Common Tern*	Loggerhead Shrike	Dickcissel
American Bittern	Northern Shrike	

*Colonial nesters

SENSITIVE SPECIES

Some species attract disproportionate attention from birders and photographers and are particularly sensitive to disturbance at nest or roosting sites. Disturbing a sensitive species' nest could cause them to abandon their breeding effort. Avoid disturbance, including playback, to these species as much as possible. Refrain from posting locations of priority species to social media to help limit disturbance.

Records of the most sensitive species are automatically hidden from public output in eBird. These species are listed below, along with the date range during which specific locations of the species are suppressed. In eBird, reports of sensitive species are displayed without precise locations, checklist comments, and other identifying information.

Sensitive Species Designations:

- King Rail (May 15 – Aug 20)
- Black Rail (year-round)
- American Goshawk (March 1 – Aug 31)
- Barn Owl (year-round)
- Long-eared Owl (year-round)
- Short-eared Owl (April 20 – June 30)
- Loggerhead Shrike (May 10 – July 31)
- Sedge Wren (June 1 – Aug 20)

For any other species or nests for which you are concerned about publicly disclosing the location of, use the following actions to help protect them. (Additional guidance from eBird can be found here.)

- Hide your checklist in eBird. If possible, submit a separate 'incidental' observation for the species of concern so that you need only hide that single observation. Checklists can only be hidden using a web browser, following these instructions: as soon as you submit, click "Hide from eBird output" under "Checklist Tools" on the right side of the page. This hides your checklist from the public *and* the Atlas data review, so you must unhide the checklist after the breeding season is over.
- Provide a vague geographic location that you should later update.
- Delay the reporting of your observation for at least one week to prevent the report from feeding an eBird alert.

Have you observed a rare species and aren't sure if you should hide your list or how best to manage it? Contact a **Regional Coordinator** for guidance.

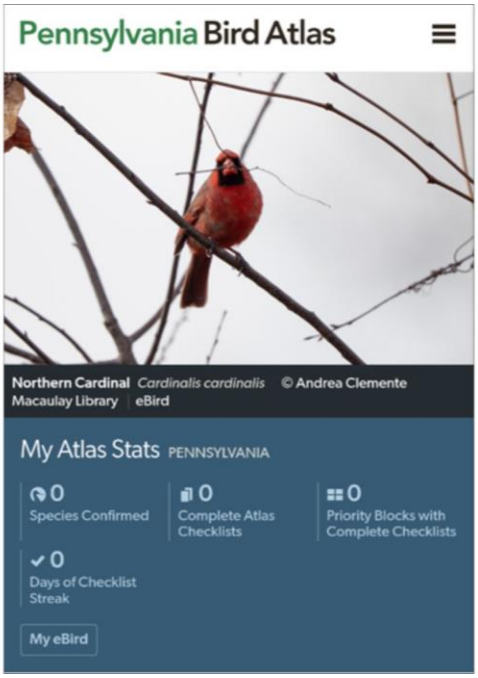
APPENDIX C: eBIRD PROJECT INSTRUCTIONS

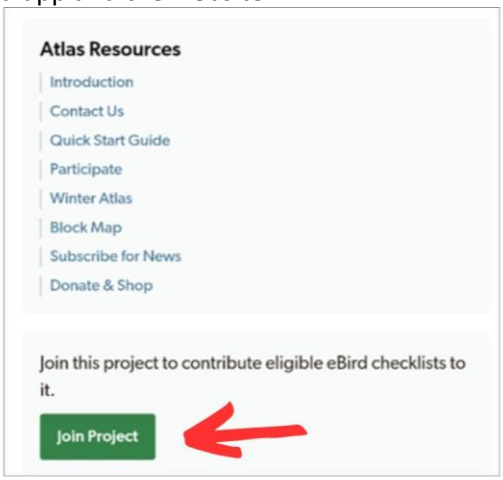
To participate in the Atlas you must first join the Pennsylvania Bird Atlas Project. Records entered into eBird via the project also enter into core eBird, so all your observations and checklists for the Atlas will also appear on the main eBird website! Using the Pennsylvania Bird Atlas project:

1. Allows us to organize, visualize, and use data more quickly and easily.
2. Indicates that you understand the Atlas concepts, including the use of breeding codes and block boundaries.

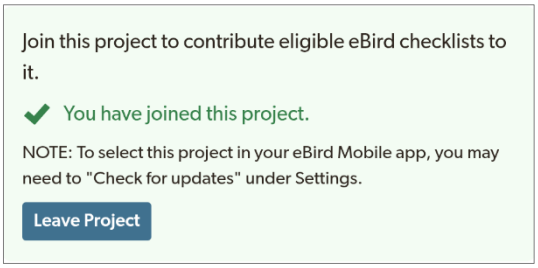
JOIN THE PROJECT

Visit the PA Bird Atlas homepage and click the link to 'Join Project' under the Atlas Resources. You will now be able to submit checklists to the Atlas from the eBird app and the website.



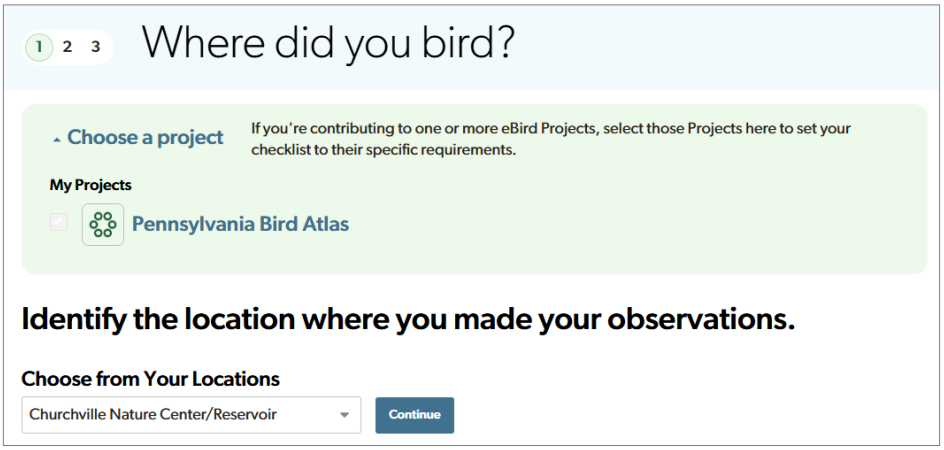


You will now see the notice that you have joined the project! If you use the eBird app, be sure to check for updates in the app settings to ensure everything works properly.



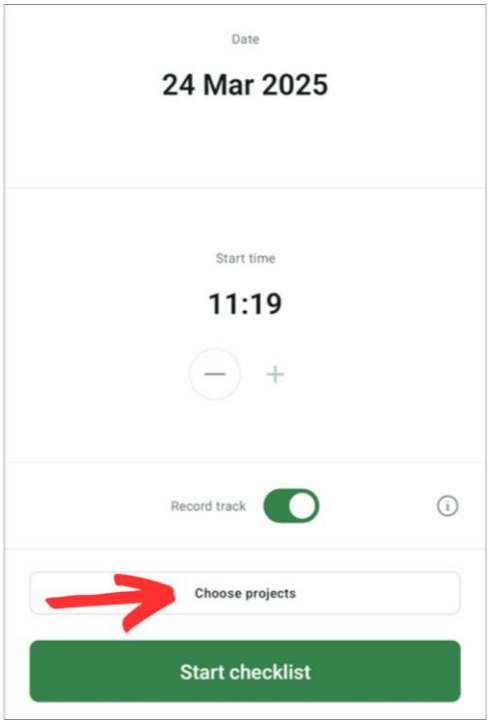
SUBMIT VIA WEB BROWSER

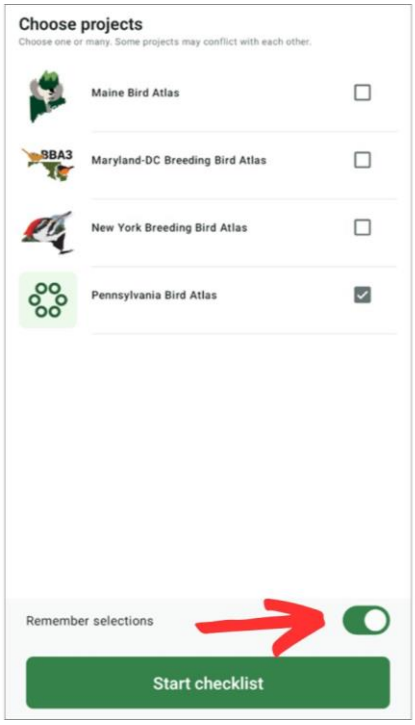
The online data submission process is the same as before. Your checklists will automatically be submitted to the Atlas when you enter your checklists at https://ebird.org/atlaspa/submit.



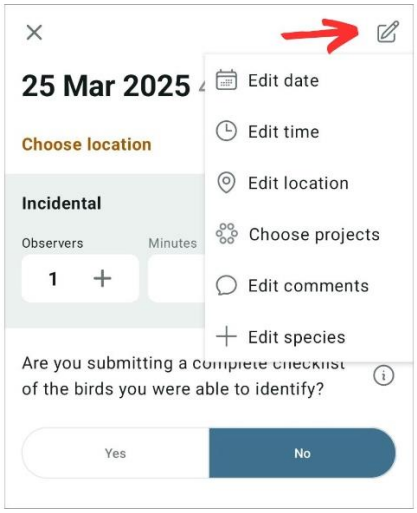
SUBMIT VIA MOBILE APP

On the eBird app home screen, you will now see an option to "Choose projects." Tap this button and select "Pennsylvania Bird Atlas" from the list of projects that you have joined. If you intend to stay in PA and contribute to the Atlas consistently, you can toggle the "Remember selections" slider at the bottom of the screen so that every checklist will submit to the PA Bird Atlas until you turn this feature off.





If you forget to turn on the Atlas project before starting a checklist, you can correct this before submitting. Tap the edit checklist symbol at the top right of the screen after you've stopped the checklist and select "Choose projects."



CHANGING THE PROJECT AFTER A CHECKLIST HAS BEEN SUBMITTED

Did you forget to switch to the project before submitting a checklist? No worries! From the eBird home page, navigate to your checklists. Open the checklist of concern and switch to the project under 'Checklist Tools.'