

Maryland & DC Breeding Bird Atlas 3

2020–2024
Handbook and Guidelines



Field Edition
February 2020



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Quick Start – more details can be found in the unabridged Atlas Handbook

The Maryland & DC Breeding Bird Atlas 3 (MD-DC BBA3) is a comprehensive survey of the birds breeding in the Maryland and DC region. Volunteer atlasers collect data on breeding evidence using eBird (ebird.org/atlasmddc/submit).

Below are some of the most important steps atlasers should take to provide high quality data. Please ensure you follow these steps while atlasing.

What to do	How to do it
Use the MD-DC BBA3 eBird portal	Only data entered through the MD-DC BBA3 eBird portal (ebird.org/atlasmddc/submit) will be used for the Atlas, so don't use the standard eBird portal to enter atlas data.
Keep the checklist distance short and within block boundaries	The distance for traveling checklists should be short, preferably <3 miles. Ideally, a single checklist will be for a single major habitat type (<i>e.g.</i> , forest, agriculture, wetland) and for a single property type (<i>e.g.</i> , park, state forest, wildlife management area, sanctuary). Additionally, checklists must not cross block boundaries.
Submit complete, independent checklists	Checklists should include all the species you identified, and each checklist is independent of any other checklist. This means that the breeding codes you use should reflect what you observed on the current checklist. Do not use the breeding codes from previous checklists to guide which breeding codes you do or do not include on your current checklist.
Provide a breeding code for each species	If you observe breeding evidence for a species within its safe dates, provide the appropriate code in your checklist, even for common species. And if you observe a species that isn't breeding, it should still be included on the checklist—just leave the breeding code blank. The Atlas will be able to create stronger inferences about distribution and reproductive phenology if more data are available.

What to do	How to do it
Provide details for species of special interest	Provide as many details as possible, including precise location, habitat, and number of nests, eggs, or young, and make an extra effort to confirm breeding, especially for uncommon species.
Contact a Coordinator if you find a sensitive species	Sensitive species include Northern Goshawk, rare owls, and Swainson's Warbler. If you observe these species, contact the County Coordinator before submitting the checklist.
Sign up for a block	Consider signing up as the primary atlaser for one or more blocks. As the primary atlaser you won't be the only atlaser in the block, but you'll be responsible for ensuring the block completion targets are completed by the end of the Atlas.

Breeding codes.

Code	Behavior	Definition
<i>Status: Observed</i>		
(Blank)	Not breeding	If a bird is outside of its breeding season or not displaying any behavior indicative of breeding, do not apply a breeding code. Leaving the breeding code blank automatically assigns it 'Observed' status, and no further action is required.
F	Flying over only	This is not necessarily a breeding code, but can be a useful behavioral distinction. Do not use this code for any flying bird. Instead, only use this code when a bird is not using the habitat.
<i>Status: Possible (do not use outside of safe dates)</i>		
H	In suitable habitat	Adult in suitable nesting habitat during its breeding season.
S	Singing male	Singing male present in suitable nesting habitat during its breeding season.

Status: Probable

S7	Singing male present 7+ days	Use only if you have observed a singing male at the exact spot (likely to be the same individual) one week or more earlier in the season. Do not use if you have observed a singing male a week earlier elsewhere on the same transect covered by your checklist.
M	Multiple (7+) singing males	At least 7 singing males present in suitable nesting habitat in the same block on the same day during its breeding season.
P	Pair in suitable habitat	Male-female pair observed in suitable nesting habitat during their breeding season.
T	Territorial defense	Permanent territory presumed through defense of breeding territory by fighting or chasing individuals of the same species.
C	Courtship, display, or copulation	Courtship or copulation observed, including displays and courtship feeding.
N	Visiting probable nest site	Visiting a probable nest site (primarily hole nesters).
A	Agitated behavior	Agitated behavior or anxiety calls from an adult. This does not include responses elicited by "pishing" or playing recordings, or mobbing behavior that species engage in year-round (<i>e.g.</i> , mobbing an owl).
B	Wren/ woodpecker nest building	Wrens and woodpeckers may build dummy nests or roost holes and thus nest-building behavior cannot be considered confirmation. Use this code in those cases.
PE	Physiological evidence	Physiological evidence of nesting, usually a brood patch. This will be used primarily by bird banders.

Status: Confirmed

CN	Carrying nesting material	Adult carrying nesting materials; nest site not seen.
NB	Nest building	Nest building at apparent nest site (should not be used for wrens and woodpeckers that build dummy nests; see code "B" for these species).
DD	Distraction display	Distraction display, including feigning injury.
UN	Used nest	Nest is present but not active. Use only if you are certain of the species that built the nest. Use 0 to describe the number of birds if none were seen.
ON	Occupied nest	Occupied nest presumed by parent entering and remaining, exchanging incubation duties, etc.
FL	Recently fledged young	Recently fledged or downy young observed while still dependent on adults.
CF	Carrying food	Adult carrying food for young (should not be used for corvids, raptors, terns, and other species that may move many miles from the nest site; often supersedes code "FL")
FY	Feeding young	Adult feeding young that have left the nest, but are not yet flying and independent (should not be used with raptors, terns, and other species that may move many miles from the nest site; often supersedes code "FL").
FS	Carrying fecal sac	Adult carrying fecal sac.
NE	Nest with eggs	Nest with eggs.
NY	Nest with young	Nest with young seen or heard.

Species of Special Interest—additional information needed

- If you find a species of special interest, please include additional information in the species comment box, such as how the identification was made, any nest details (*e.g.*, height above ground, species of tree, number of eggs), habitat information, and specific location.
- If you find a sensitive species or a species breeding that isn't on the list, record the same details and contact the County Coordinator before submitting your checklist.
- If you find a Bald Eagle nest, record nest and location details.
- If you find a breeding colony, record the location and number of nests.

Safe dates – do not use Possible breeding codes outside of safe dates.

- Priority species are bolded (location, habitat, nest info).
- Sensitive species are asterisked (report to coordinator).
- Colonial species / Bald Eagle are italicized (location info for nests only).

Species	Start	End
Canada Goose	5 / 10	7 / 31
Mute Swan	5 / 1	8 / 31
Wood Duck	4 / 20	8 / 15
Blue-winged Teal	6 / 5	7 / 5
Gadwall	5 / 20	8 / 20
Mallard	5 / 15	8 / 20
American Black Duck	5 / 20	7 / 31
Green-winged Teal	6 / 1	6 / 30
Ring-necked Duck	5 / 20	8 / 15
Hooded Merganser	5 / 20	8 / 31
Common Merganser	5 / 20	7 / 30
Ruddy Duck	6 / 10	8 / 25
Northern Bobwhite	4 / 15	9 / 30
Ring-necked Pheasant	4 / 15	9 / 30
Ruffed Grouse	4 / 1	9 / 30
Wild Turkey	4 / 15	9 / 30
Pied-billed Grebe	5 / 20	7 / 10
Rock Pigeon	1 / 1	12 / 31
Eurasian Collared-Dove	6 / 1	7 / 30
Mourning Dove	4 / 15	7 / 20
Yellow-billed Cuckoo	6 / 15	7 / 31
Black-billed Cuckoo	6 / 20	7 / 20

Species	Start	End
Common Nighthawk	6 / 5	7 / 15
Chuck-will's-widow	5 / 15	8 / 10
Eastern Whip-poor-will	5 / 10	7 / 15
Chimney Swift	5 / 15	8 / 10
Ruby-throated Hummingbird	5 / 15	7 / 20
King Rail	5 / 1	8 / 31
Clapper Rail	5 / 1	8 / 31
Virginia Rail	5 / 20	8 / 15
Sora	6 / 1	7 / 31
Black Rail	5 / 1	8 / 15
Common Gallinule	5 / 20	8 / 31
American Coot	6 / 10	8 / 25
Purple Gallinule	6 / 20	7 / 31
Black-necked Stilt	5 / 15	7 / 15
American Oystercatcher	5 / 15	7 / 25
Piping Plover	5 / 15	7 / 20
Killdeer	4 / 20	6 / 25
Upland Sandpiper	5 / 20	6 / 25
American Woodcock	4 / 15	8 / 31
Wilson's Snipe	6 / 1	7 / 15
Spotted Sandpiper	6 / 10	6 / 30
Willet	6 / 10	7 / 1
<i>Laughing Gull</i>	6 / 5	7 / 10
Herring Gull	6 / 5	7 / 10
Great Black-backed Gull	6 / 5	7 / 10
<i>Least Tern</i>	5 / 25	7 / 5
<i>Gull-billed Tern</i>	5 / 15	7 / 5
<i>Common Tern</i>	6 / 5	6 / 30
<i>Forster's Tern</i>	5 / 15	6 / 25
<i>Royal Tern</i>	5 / 25	7 / 5
<i>Black Skimmer</i>	5 / 25	7 / 5
Double-crested Cormorant	6 / 10	6 / 30
<i>Brown Pelican</i>	6 / 1	7 / 31
American Bittern	6 / 1	7 / 10
Least Bittern	5 / 20	7 / 31

Species	Start	End
<i>Great Blue Heron</i>	5 / 15	6 / 30
<i>Great Egret</i>	5 / 20	6 / 20
<i>Snowy Egret</i>	5 / 20	6 / 30
<i>Little Blue Heron</i>	5 / 20	6 / 20
<i>Tricolored Heron</i>	5 / 20	6 / 30
Cattle Egret	5 / 20	6 / 20
Green Heron	5 / 1	7 / 15
<i>Black-crowned Night-Heron</i>	5 / 10	6 / 30
<i>Yellow-crowned Night-Heron</i>	4 / 20	6 / 30
White Ibis	5 / 20	6 / 15
Glossy Ibis	6 / 1	6 / 30
Black Vulture	5 / 1	7 / 31
Turkey Vulture	5 / 15	8 / 20
Osprey	6 / 1	8 / 15
Mississippi Kite	6 / 10	7 / 31
Northern Harrier	5 / 20	7 / 25
Sharp-shinned Hawk	6 / 1	7 / 31
Cooper's Hawk	5 / 20	7 / 31
Northern Goshawk*	4 / 15	8 / 31
<i>Bald Eagle</i>	4 / 15	8 / 5
Red-shouldered Hawk	5 / 10	8 / 20
Broad-winged Hawk	6 / 15	8 / 10
Red-tailed Hawk	5 / 10	8 / 20
Barn Owl*	4 / 15	9 / 30
Eastern Screech-Owl	4 / 1	8 / 15
Great Horned Owl	12 / 15	8 / 15
Barred Owl	1 / 15	8 / 15
Long-eared Owl*	5 / 1	9 / 30
Short-eared Owl*	5 / 1	9 / 30
Northern Saw-whet Owl*	5 / 5	9 / 10
Belted Kingfisher	4 / 10	7 / 20
Yellow-bellied Sapsucker	5 / 20	8 / 31
Red-headed Woodpecker	5 / 25	8 / 20
Red-bellied Woodpecker	3 / 15	8 / 31
Downy Woodpecker	3 / 15	8 / 31

Species	Start	End
Savannah Sparrow	6 / 5	8 / 10
Henslow's Sparrow	5 / 15	8 / 31
Song Sparrow	5 / 1	7 / 31
Swamp Sparrow (Coastal Plain)	6 / 1	7 / 31
Eastern Towhee	5 / 20	8 / 31
Yellow-breasted Chat	5 / 25	8 / 5
Bobolink	6 / 5	6 / 30
Eastern Meadowlark	4 / 25	9 / 10
Orchard Oriole	6 / 1	7 / 5
Baltimore Oriole	6 / 1	7 / 25
Red-winged Blackbird	5 / 1	7 / 10
Brown-headed Cowbird	5 / 1	7 / 10
Common Grackle	4 / 15	6 / 30
Boat-tailed Grackle	4 / 15	8 / 31
Ovenbird	5 / 20	8 / 5
Worm-eating Warbler	5 / 20	7 / 20
Louisiana Waterthrush	5 / 1	7 / 10
Northern Waterthrush	6 / 5	7 / 15
Golden-winged Warbler	5 / 25	7 / 20
Blue-winged Warbler	5 / 25	7 / 20
Black-and-white Warbler	5 / 15	7 / 25
Prothonotary Warbler	5 / 10	7 / 20
Swainson's Warbler*	4 / 20	8 / 31
Nashville Warbler	5 / 25	8 / 15
Mourning Warbler	6 / 15	7 / 31
Kentucky Warbler	5 / 25	7 / 15
Common Yellowthroat	5 / 25	8 / 10
Hooded Warbler	5 / 25	7 / 25
American Redstart	6 / 10	7 / 20
Cerulean Warbler	5 / 25	8 / 5
Northern Parula	6 / 1	8 / 15
Magnolia Warbler	6 / 10	8 / 5
Blackburnian Warbler	6 / 10	7 / 31
Yellow Warbler	6 / 1	7 / 10
Chestnut-sided Warbler	6 / 1	8 / 10

Species	Start	End
Hairy Woodpecker	3 / 15	8 / 31
Pileated Woodpecker	3 / 15	8 / 31
Northern Flicker	5 / 10	8 / 25
American Kestrel	5 / 15	7 / 15
Peregrine Falcon	5 / 20	8 / 15
Monk Parakeet	6 / 1	7 / 30
Eastern Wood-Pewee	6 / 1	8 / 15
Acadian Flycatcher	5 / 25	8 / 5
Alder Flycatcher	6 / 10	7 / 20
Willow Flycatcher	6 / 10	7 / 20
Least Flycatcher	6 / 5	7 / 20
Eastern Phoebe	5 / 1	8 / 31
Great Crested Flycatcher	5 / 25	7 / 31
Eastern Kingbird	5 / 25	7 / 5
White-eyed Vireo	5 / 25	8 / 15
Yellow-throated Vireo	5 / 25	8 / 15
Blue-headed Vireo	6 / 1	8 / 20
Warbling Vireo	6 / 1	8 / 10
Red-eyed Vireo	6 / 1	7 / 31
Loggerhead Shrike	5 / 10	7 / 20
Blue Jay	5 / 25	9 / 5
American Crow	4 / 20	8 / 31
Fish Crow	5 / 10	8 / 31
Common Raven	4 / 1	7 / 31
Carolina Chickadee	3 / 1	8 / 31
Black-capped Chickadee	5 / 1	9 / 20
Tufted Titmouse	3 / 1	8 / 31
Horned Lark	4 / 10	9 / 5
N. Rough-winged Swallow	5 / 25	6 / 20
Purple Martin	6 / 1	6 / 25
Tree Swallow	5 / 25	6 / 25
<i>Bank Swallow</i>	6 / 1	6 / 20
Barn Swallow	5 / 25	6 / 25
Cliff Swallow	6 / 1	6 / 25
Golden-crowned Kinglet	5 / 20	9 / 10

Species	Start	End
Red-breasted Nuthatch	6 / 1	7 / 20
White-breasted Nuthatch	5 / 10	8 / 15
Brown-headed Nuthatch	3 / 20	8 / 15
Brown Creeper	5 / 15	8 / 31
Blue-gray Gnatcatcher	5 / 15	7 / 31
House Wren	5 / 20	8 / 15
Winter Wren	5 / 20	8 / 31
Sedge Wren	6 / 10	8 / 31
Marsh Wren	5 / 25	8 / 25
Carolina Wren	3 / 1	9 / 30
European Starling	4 / 1	7 / 31
Gray Catbird	5 / 25	8 / 31
Brown Thrasher	5 / 15	8 / 31
Northern Mockingbird	4 / 1	9 / 10
Eastern Bluebird	5 / 1	8 / 31
Veery	6 / 10	8 / 10
Hermit Thrush	5 / 25	9 / 15
Wood Thrush	5 / 25	8 / 20
American Robin	5 / 1	7 / 31
Cedar Waxwing	6 / 15	7 / 31
House Sparrow	2 / 1	8 / 31
House Finch	5 / 1	7 / 15
Purple Finch	6 / 1	8 / 10
Red Crossbill	4 / 1	8 / 31
Pine Siskin	5 / 20	8 / 31
American Goldfinch	6 / 15	8 / 31
Grasshopper Sparrow	5 / 25	8 / 31
Chipping Sparrow	5 / 1	8 / 31
Clay-colored Sparrow	6 / 1	7 / 31
Field Sparrow	5 / 1	8 / 31
Dark-eyed Junco	6 / 1	7 / 31
White-throated Sparrow	6 / 10	7 / 31
Vesper Sparrow	5 / 15	8 / 31
Seaside Sparrow	6 / 1	8 / 10
Saltmarsh Sparrow	6 / 1	8 / 10

Species	Start	End
Black-throated Blue Warbler	6 / 5	8 / 5
Pine Warbler	4 / 25	8 / 10
Yellow-rumped Warbler	6 / 1	8 / 20
Yellow-throated Warbler	5 / 1	7 / 15
Prairie Warbler	5 / 25	7 / 20
Black-throated Green Warbler (Wayne's)	6 / 10	8 / 5
Canada Warbler	6 / 10	7 / 15
Summer Tanager	6 / 5	8 / 10
Scarlet Tanager	5 / 25	8 / 10
Northern Cardinal	3 / 15	9 / 30
Rose-breasted Grosbeak	6 / 15	8 / 10
Blue Grosbeak	6 / 5	8 / 10
Indigo Bunting	5 / 25	8 / 15
Dickcissel	6 / 5	8 / 10

Coverage schedule – use this schedule to optimize block coverage.

January-April	Begin searching for Great Horned and Barred Owls. When you find owls, record their precise location so you can return a week or so later and upgrade their breeding status. Other owls will begin calling in March, April, and May; early spring nights will be the best time to find these species. Many resident songbirds will begin setting up territory in March.
May	By mid-May, most birds have already set up territories and are singing. Trips to your block beginning early in the morning will be the best way to detect these birds. Record precise locations for each singing species so that you can return a week or so later and upgrade their breeding status.
June	Some species, most notably American Goldfinches and Cedar Waxwings, don't begin nesting until June. An early summer trip to your block will help you record their breeding, as well as offer an opportunity to upgrade species you detected earlier.
July-December	By mid-summer many species have stopped or slowed singing, but nesting may still be ongoing. It may take more effort to upgrade breeding codes, but many species will be raising a second brood or re-nesting after a failed first clutch. This will continue into September for some species, but by October breeding efforts are complete. Exceptions exist for Rock Pigeons, a year-round nester, Great Horned Owls, which begin calling once again in December, and Bald Eagles, which may start nest building in late fall.

Documenting nests – When you find a bird's nest, record information about the nest in the species comment box (*e.g.*, number of eggs, height above ground, tree/shrub species). You can also use Nestwatch.org to follow the outcome of the nest. Before interacting with a nest, read the guidelines about how to minimize disturbance to the nest. You can find those guidelines on Nestwatch.org or on the Atlas website (ebird.org/atlasmdcc/about/handbooks-maps-forms).

Block completion targets – once reached, start atlasing a different block.

<p>Species</p>	<p>Most blocks contain 90-100 breeding species, except for those in urban areas, agricultural areas, and 'edge' blocks containing mostly water or along the state border. Therefore, the general goal is to locate at least 70 species in rural blocks and 40 species in blocks with primarily urban or agricultural areas or blocks that are primarily water. Use the block species lists (found on the Atlas website) compiled by previous atlases as a guide for which species occur in a given block and try to find all of them.</p>
<p>Time</p>	<p>The minimum observer effort for each block is 20 hours, but the emphasis should be on covering all habitats in the block thoroughly rather than just the number of hours involved.</p>
<p>Breeding status</p>	<p>A minimum of 25% Confirmed, 50% Probable, and a maximum of 25% Possible breeding status is required for each block. Special effort should be made to confirm locally unexpected species and species of special interest.</p>
<p>Nocturnal</p>	<p>Some widespread species (<i>e.g.</i>, owls, nightjars, marsh birds) are most active at night, so a nocturnal visit of at least one hour is required. Two visits of two hours, one in early spring and one in summer, would be preferred.</p>
<p>Habitats</p>	<p>Block coverage should be dispersed to cover all of the major habitat types that are available (<i>e.g.</i>, upland deciduous forest, grasslands, agricultural fields, forested wetlands, marshes).</p>
<p>Seasonality</p>	<p>Block coverage should be dispersed throughout the breeding season. Later in the season it is easier to confirm species, especially species that tend to breed later (<i>e.g.</i>, goldfinches).</p>

Coordinator contact information.

Region	Coordinator	Contact
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Documenting volunteer time – The Atlas is funded, in part, by a federal grant from the U.S. Fish and Wildlife Service (USFWS) to the Maryland Department of Natural Resources (MD DNR). However, this funding is only provided if MD DNR can match it with state funds or volunteer time. **Every hour of your time that you are willing to document allows us to spend nearly \$75 of federal funds.** A volunteer time form is available on the Atlas website. Please complete and sign the form, then mail the original copy (unfortunately scanned or electronic forms are not accepted by USFWS) to Lynn Davidson at MD DNR-WHS, 580 Taylor Ave E-1, Annapolis, MD 21401. Any time captured by eBird (*i.e.*, checklist duration) does not need to be duplicated on the form. Instead, record time spent on atlas-related activities such as driving, training, or data entry. **Forms should be mailed quarterly** with deadlines of April 7, July 7, October 7, and January 7 (*e.g.*, all January–March forms should be mailed by April 7), but all forms must be mailed by **July 7** of that year.

