

Wood Duck Nest Box Plans

Aix sponsa

The Wood Duck is arguably North America's most stunning waterfowl, and providing a nest box is one of the most effective ways to support their recovery in wetland habitats. This project offers a front-row seat to the 'jump of faith'—the incredible moment when day-old ducklings leap from the box to join their mother in the water.

Nest Box Specifications

Entrance hole	3 x 4 inch (76 x 102 mm) oval
Floor dimensions	9.75 x 9.75 inches (248 x 248 mm)
Interior depth	20 inches (508 mm)
Mount height	6-20 feet (1.8-6.1 m) above water or ground
Facing direction	South or East, facing open water with a clear flight path

Install over water or within 100 feet of a permanent wetland or pond. Ensure there are no overhanging branches within 5 feet that would allow raccoons to drop onto the roof. Space boxes at least 50-100 feet apart to reduce 'dump nesting' by multiple females.

Cut List

From a 1x12 x 12 ft

Panel	Dimensions	Qty	Notes
Back	11.25" x 32"	1	Provides 4" mounting flanges at both top and bottom
Front	11.25" x 24"	1	Cut 3"x4" oval hole 4" from top; staple hardware cloth 'ladder' to the inside face below the hole
Side (Fixed)	11.25" x 24"	1	Slope top edge from 24" back to 20" front to match roof pitch
Side (Door)	11.25" x 24"	1	Hinge from the top for cleaning; trim 1/4" off bottom for clearance

Roof	11.25" x 16"	1	Provides a 3" overhang in the front to protect from rain
Floor	9.75" x 11.25"	1	Recess 1/2" up from bottom; drill four 1/2" drainage holes

The floor is cut to 9.75" to fit between the two side panels. The front and back panels overlap the side edges. A 12-foot board allows for the extra height required for Wood Duck cavities and the necessary mounting extensions.

Materials & Construction

Wood: 3/4-inch (19 mm) untreated cedar, cypress, or redwood. Never use pressure-treated lumber.

Boards: A single 1" x 12" x 12' untreated cedar board provides all necessary panels including the oversized roof and mounting backboard.

Hardware: 35x 2" stainless steel or galvanized deck screws, 2x 2" exterior brass hinges, 1x stainless steel gate latch, 18" x 10" piece of 1/4" galvanized hardware cloth, Staples for hardware cloth, 4 inches of kiln-dried cedar shavings

Ventilation: Leave a 1/2-inch gap between the top of the side panels and the roof, or drill three 1/2-inch holes near the top of each side panel.

Drainage: Drill four to six 1/2-inch holes in the floor panel and clip 1/2-inch off each corner to ensure the nesting material stays dry.

Predator guard: A 36-inch wide cone-shaped metal baffle or a 4-foot long stovepipe guard is mandatory. The oval entrance hole (4" wide by 3" tall) is specifically designed to prevent larger raccoons from entering.

Materials Checklist

- 1x 1" x 12" x 12' untreated cedar board
- 35x 2" stainless steel deck screws
- 2x 2" exterior-grade brass or stainless hinges
- 1x Stainless steel gate latch or hook-and-eye
- 10" x 18" piece of 1/4" galvanized hardware cloth
- Heavy-duty staples for ladder attachment
- 4-6 inches of kiln-dried cedar or pine shavings
- 36-inch metal cone baffle (for mounting post)
- 2x 4" lag bolts with washers for tree/post mounting

1/2" drill bit (for drainage and ventilation)

Jigsaw (for oval hole and tapered cuts)

Power drill and screwdriver bits

Seasonal Timeline

Install: Late January in the South; early to mid-March in Northern states and Canada

Nesting start: In the Southeast, nesting begins as early as February. In the Midwest and Northeast, peak activity is April through May. Western populations typically begin in late March.

Clutch size: 6-16 eggs (can be higher if 'dump nesting' occurs)

Incubation: 28-32 days

Fledging: 24 hours after hatching (ducklings jump from the box)

Cleaning: Clean the box every January. Remove old nesting material and add 4-6 inches of fresh cedar or pine shavings, as Wood Ducks do not carry their own nesting material.

Regional Considerations

Wood Ducks breed across most of the central and eastern United States, the Pacific Coast, and southern Canada. They require wooded wetlands, swamps, or riparian corridors with quiet water and plenty of cover.

Nesting follows the spring thaw. Birds in the Deep South may start 8-10 weeks earlier than those in the Great Lakes region. High-elevation mountain populations may delay nesting until late May.

Raccoons and starlings are the primary threats. A metal cone baffle prevents climbing, while the specific 3x4 inch oval entrance hole denies entry to larger raccoons and discourages starlings.

Camera Placement

Because Wood Duck boxes are significantly deeper than standard songbird houses, internal camera placement is best achieved by mounting a wide-angle, IR-equipped camera in one of the top rear corners. This allows for a full view of the hen and the clutch while keeping the hardware out of the path of the ducklings' upward scramble. Ensure all cables are secured with staples and exit through a small hole at the top to prevent entanglement.

External cameras are equally valuable for Wood Ducks, particularly for capturing the spectacular

moment when the ducklings fledge. Position a weather-proof outdoor camera on a nearby post or tree, approximately 6 to 10 feet away, aimed directly at the entrance hole. High frame-rate settings are recommended to capture the fast-moving 'jump' which usually occurs early in the morning, approximately 24 hours after hatching.

Since Wood Ducks are sensitive to light and human activity near the nest, avoid using cameras with visible white LEDs for night vision; instead, rely strictly on 940nm 'no-glow' infrared. Routing power is the biggest challenge for these wetland-based boxes, so consider a solar-powered camera kit or a long-range wireless bridge if the box is positioned far from the house.

For interior monitoring, a small USB-powered interior cam with a wide lens is ideal. For the exterior perimeter, a high-quality trail camera with a fast trigger speed can monitor for predators like raccoons or competing starlings, providing essential data on the success of your habitat placement.

Powering with a USB solar panel

Mount a 5V USB solar panel with a built-in battery 1-2 ft above the box on the same post, angled 30-45 degrees from vertical and facing south. Run the USB cable down the post inside split loom conduit (squirrels will chew unshielded wire), enter the box through the same grommeted hole as the camera cable, and seal with exterior silicone. Choose a panel with a 5-10 Ah battery buffer so the camera runs through cloudy days.

Common Problems & Solutions

Dump nesting (too many eggs): Space boxes further apart (100+ feet) and out of direct visual line-of-sight from one another.

European Starling occupation: Clean out starling nests immediately and ensure the oval hole is exactly 3 inches high to make entry difficult.

Ducklings cannot climb out: Always install a 1/4" hardware cloth ladder or deeply roughen the inside front panel so day-old ducklings can reach the hole.

Bees or wasps: Rub the interior ceiling with a bar of unscented soap to prevent combs from adhering.

Raccoons reaching in: Ensure the distance from the hole to the eggs is at least 15 inches and use the recommended oval hole shape.

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