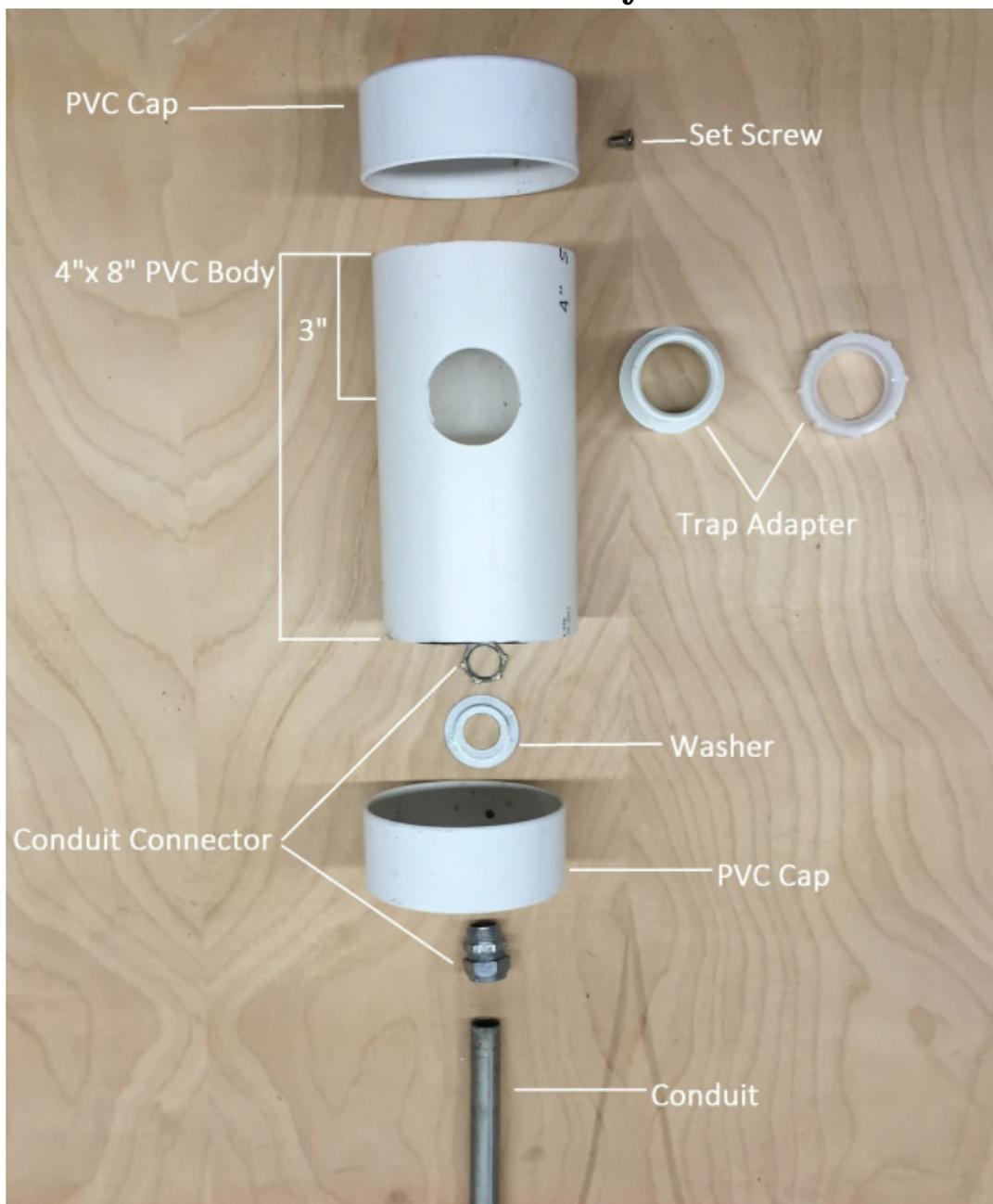


# Kentucky Department of Fish and Wildlife Resources

## Prothonotary Warbler PVC Nest Box Design



### **Tools**

Drill  
Saw  
Adjustable wrench  
Ratchet  
Socket  
1-7/8" Hole saw  
3/16" Drill bit  
13/16" Drill bit

### **Materials**

4" x 8" PVC drain pipe  
(2) 4" PVC pipe covers  
1 1/4"-1 1/2" PVC trap adapter  
1"-1 1/2" Reducing washer  
1/2" EMT compression conduit connector  
1/2" EMT conduit coupling  
10' x 1/2" EMT conduit  
5/8" Flat head set screw

### **Additional**

*PVC cement*  
*Denatured alcohol*  
*Plastic textured spray paint*  
*Exterior waterproof paintable silicone caulk*  
*Peat moss*



**Step 1: Making the body** - Cut a 10' piece of thin walled 4" diameter PVC drain pipe into (14) 8" pieces. \* *do not use flared ends*. These 8" sections will make up the body of the nest box.

**Step 2: Cutting entry hole** – from the top of the 8" section, measure down 3" and mark, this will be the center of the entry hole. Using a 1 -7/8" hole saw bit, drill a hole into the PVC pipe, with the 3" mark as your center point. Attach the 1 ¼"-1 ½" PVC trap adapter, with the supplied nut on the inside of the pipe.



**Step 3: Conduit connector** – using a 13/16" drill bit, drill a hole in the center of one of the 4" PVC end caps, this will become the bottom of the box. Slide the conduit connector through the cap, with the threaded end inside the cap. Place the reducing washer over the connector on the inside of the cap. Then tighten down the supplied conduit connector washer using an adjustable wrench or ratchet and socket.



Inside

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View of conduit connector with washer

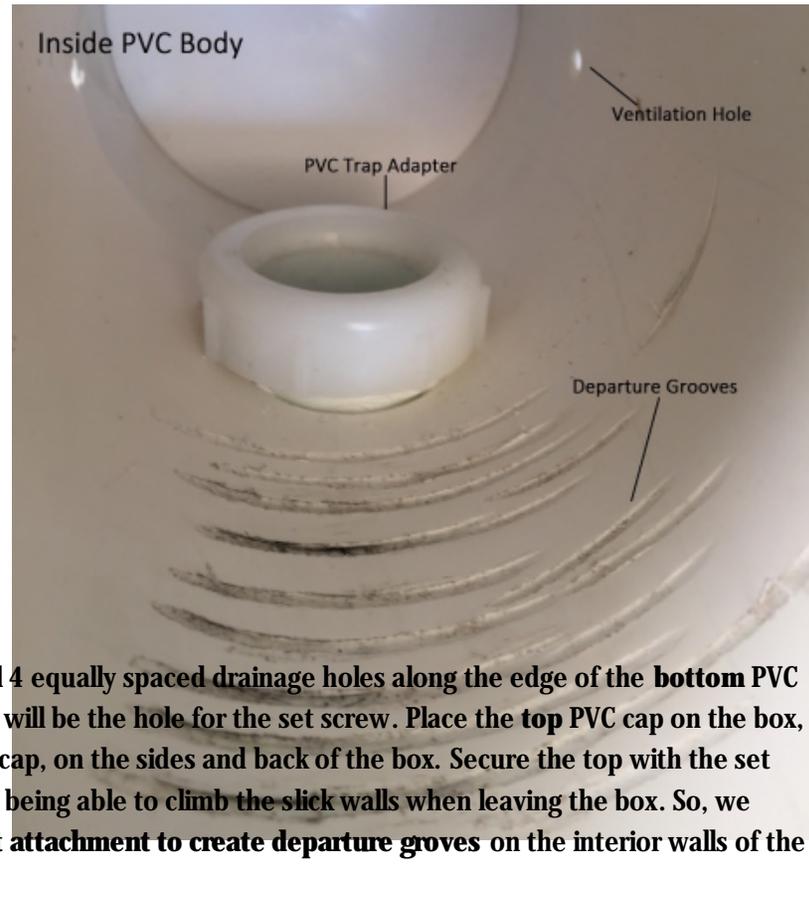
Outside

Drainage Holes



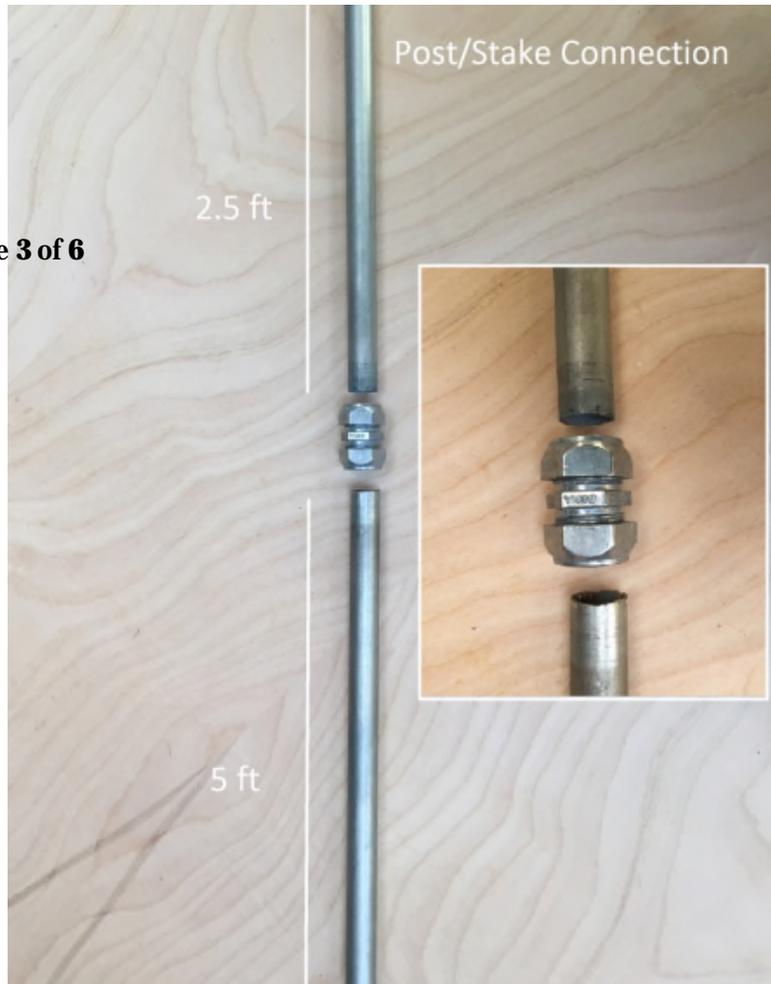
View of conduit connector attachment

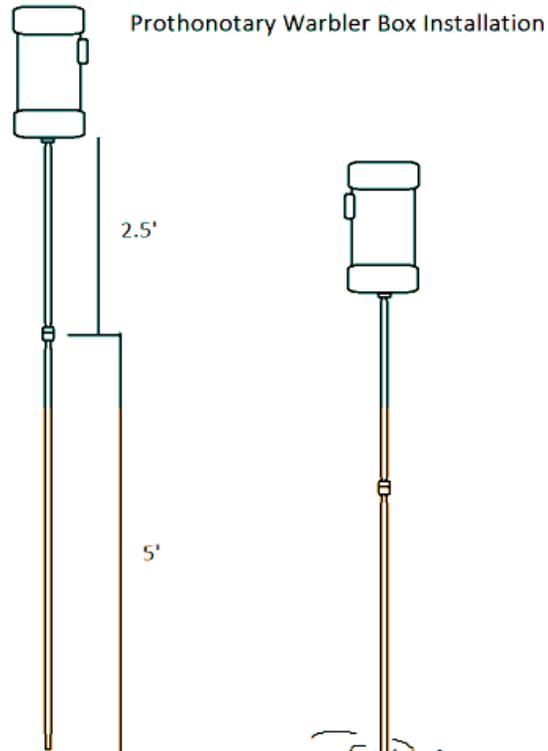




**Step 4: Drainage hole, ventilation, and more – using a 3/16” drill bit, drill 4 equally spaced drainage holes along the edge of the bottom PVC cap. Using the same bit, drill one hole in the side of the top PVC cap, this will be the hole for the set screw. Place the top PVC cap on the box, and then drill 3 equally spaced ventilation holes just below the top PVC cap, on the sides and back of the box. Secure the top with the set screw. When designing this box, we were concerned about the fledgling being able to climb the slick walls when leaving the box. So, we recommend using a 3” cut-off blade (like what goes on a grinder) drill bit attachment to create departure grooves on the interior walls of the box, under the trap adaptor. Note: PVC walls are very thin, test the blade on one of the discarded “flared” PVC pipe ends and mark the blade for the appropriate depth.**







**Step 5: Assembly** – using denatured alcohol, clean all PVC areas that will be glued or painted. Following the directions on the package, use PVC cement to glue the bottom PVC cap to the body. Following the directions on the package, on the outside of the box, use paintable silicone caulking to seal around the PVC trap adapter and the body of the box. Allow pieces to dry. Use textured plastic spray paint to camouflage the finished box. Additionally, use a dark colored paint, and spray a bit of paint through the trap adapter to the inside rear wall of the box to create a dark, cavity-like look to the box. *We also recommend adding a little peat moss into the bottom of the box once finished.*





**Step 6: Conduit stakes – take a 10' x 1/2" piece of EMT galvanized conduit and cut in half. One of the 5' pieces will be the ground stake, and can be set aside. The remaining 5' section should again be cut in half, making two 2 1/2' pieces; these pieces will make setting posts for two boxes. Attach the finished box to one end of a 2 1/2' conduit post using the conduit connector; attach the remaining conduit coupler to the opposite end of the 2 1/2' conduit post and the 5' conduit ground stake. This removable staking system will allow easy installation, the boxes can be taken down for cleaning, and it will keep the coupling out of the water.**



## **Prothonotary Warbler Box Installation**

**Location:** prothonotary warblers nest in wooded swamps, and bottomland hardwood forests. Boxes should be placed near or over slow moving rivers, lakes, sloughs, swamps, or any similar habitat. **It is important that boxes** are placed in a shaded location to prevent them from becoming overheated. Take care in selecting a location that is at least 5' from any low hanging limbs, bushes or branches to make boxes less accessible to predators. Boxes should also be 1-2' above the maximum flood level. If the box is on land, face the entry hole toward water, and if the box is in water, face the entry hole towards land. \*When installing multiple boxes, place boxes at approximately 100m intervals.

**Setting Post:** take the 5' section of conduit and sink 2' into the ground\*if using a hammer, be sure to place a piece of wood on top of the conduit before hammering to prevent deformation to the conduit end. Once the conduit is set, use the conduit coupler to attach the nest box and post to the 5' piece of conduit. Using an adjustable wrench tighten down the coupler.

**Maintenance:** nest boxes should be cleaned out once a year. This box design makes nest box cleaning very simple. You will need an adjustable wrench and a flat head screwdriver, or a coin. First loosen the conduit coupler that is attached to the ground stake. Remove the post attached to the nest box. You may then use the screwdriver/coin to loosen the set screw attached to the top cap of the box. Remove the cap and clean out.

**Replace cap and set screw. Then secure the nest box post back onto the ground stake.**