

## BURROWING OWLS

Burrowing Owls are medium-sized birds that nest underground in burrows created by badgers, prairie dogs, or ground squirrels. In North America, they breed in grasslands, deserts, and shrub-steppe habitat. These unique owls are typically active throughout the day and will tolerate moderate human activity.



Burrowing Owl populations are declining in portions of their range in North America. Lack of suitable nesting burrows is thought to be one of the main factors contributing to population declines. Installing artificial nesting burrows is one conservation measure that may help maintain local Burrowing Owl populations.

## BURROWING OWLS & GOLF COURSES

Burrowing Owls are attracted to golf courses because they prefer to nest and forage in open areas with short grass.

Burrowing Owls may benefit local golf courses by:

- Controlling rodent populations. Owls eat small rodents such as mice, voles, and pocket gophers.
- Preventing outbreaks of insects. Owls feed on invertebrates such as locusts, grasshoppers, beetles, crickets, scorpions, and earwigs.
- Providing wildlife viewing for golfers. The owls are a popular and charismatic species that people enjoy watching.
- Providing positive publicity. Golf courses receive positive local publicity by helping conserve a high-profile species of wildlife.

The golfing industry in North America can play a role in helping to restore Burrowing Owl populations by providing artificial nesting burrows on suitable golf courses. This pamphlet is intended to assist superintendents and grounds crews at suitable golf courses throughout the range of Burrowing Owls to install artificial nesting burrows.



## WHEN & WHERE TO INSTALL ARTIFICIAL BURROWS

Burrows should only be installed on golf courses located in grassland, desert, and shrub-steppe areas within the current range of the burrowing owl (see map below). Artificial burrows are much more likely to be used by in owls at golf courses that are nearby natural burrow owl nesting locations. Late September through early February is the optimal time for installation. However, they can be installed any time of year though occupation is not likely to occur until March when the owls return from migration and search for burrows.

Burrows should not be installed near sprinkler heads (preferably >150 feet from the nearest sprinkler). Burrows should be installed in non-maintained areas (areas with minimal watering and mowing) with a minimum of 100 feet between the burrow and the nearest maintained area.



## MATERIALS NEEDED FOR ARTIFICIAL BURROW INSTALLATION

10 feet (3 meters) of 4 inch (10 cm) slotted drainage tubing  
 5-gallon (19 liter) bucket or a large Rubbermaid container (1)  
 Drill and ¼ inch (6.35 mm) bit  
 5 inch (13 cm) trenching shovel  
 Spade  
 Small saw to cut bucket  
 Pic-axe  
 Utility blanket (for dirt pile)



Upper far left: Owl standing at burrow (C.Conway).

Lower far left: Owl pair at artificial burrow on partner golf course (C.Conway).

Left: Materials for artificial burrow (D. Heane)

Above: Range map of Burrowing Owls (Owling.com).

Right: Completed artificial burrow on golf course (M. Smith).

## INSTALLATION INSTRUCTIONS FOR ARTIFICIAL BURROWS

An artificial nesting burrow consists of a 5-gallon plastic bucket buried upside-down (without the lid) 4.25 feet below ground. Ten feet of 4-inch corrugated drainage tubing is used to create a sloped tunnel leading from the ground surface down to the nest chamber.

The 4-inch opening of the drainage tubing and a small patch of dirt are all that is visible after an artificial burrow is installed [see picture below and (c) & (d) on back panel]. Golf course mowers can go right over the burrow entrance of artificial burrows.

Please refer to the diagrams on the back panels of this brochure. Using a trencher or other mechanical means of digging can save time during installation.

**Bucket:** First, drill 20 to 25 holes in the bucket to prevent moisture or CO<sub>2</sub> buildup. Cut a 4-inch x 4-inch hole in the lip of the bucket to allow the tubing to enter the bucket. The bucket is installed upside down to serve as the nest chamber.

**Tubing/Tunnel:** Tunnel is dug to replicate important features of natural burrows:

- a 90° curve in drainage tubing to block light [see (a) on back panel];
- a sharp angle during the first meter [see (b) on back panel];
- 3 meters in length.

**Burrow Entrance:** Tunnel opening should not stick out above grass height so that mowing and other maintenance can continue without interruption [see (c) & (d) on back panel]. The 10-inch x 14-inch patch of dirt at the tunnel entrance [see (c) & (d) on back panel] provides a search image that may help owls locate vacant burrows.



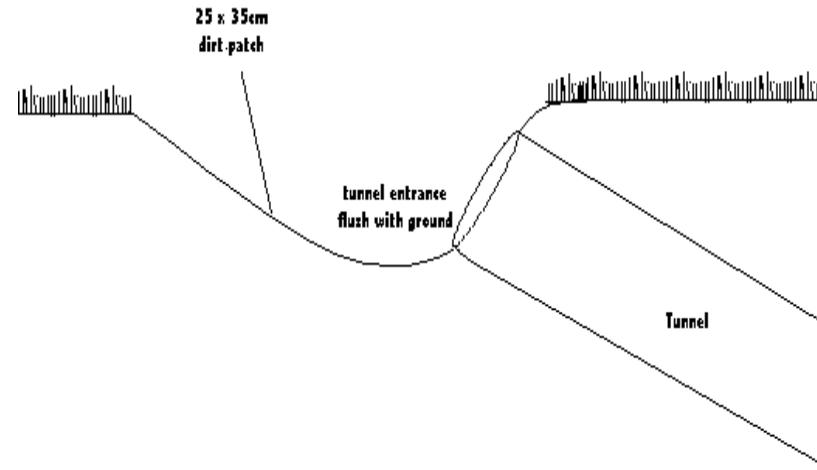
# HOW TO INSTALL ARTIFICIAL NESTING BURROWS FOR BURROWING OWLS:

## A GUIDE FOR GOLF COURSE SUPERINTENDENTS AND GROUNDS CREWS

a) Overview of burrow layout with the sod removed (D. Heane).



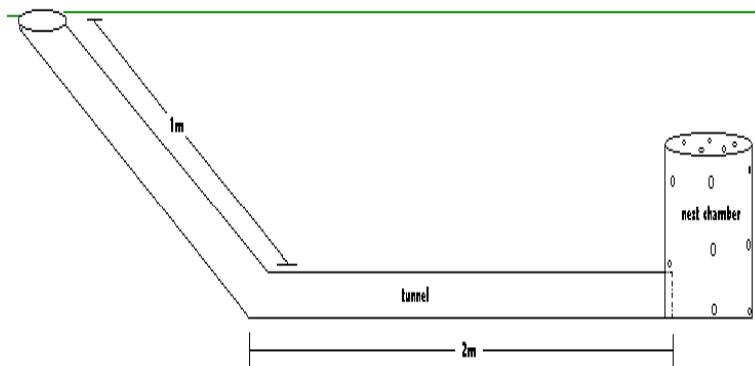
c) Side view of tunnel entrance.



d) Top view of finished burrow (M. Smith).



b) Side view underground.



We gratefully acknowledge the US Golf Association's Wildlife Links program for their financial support of this project as well as our partner USGA golf courses in eastern Washington (Horn Rapids Golf Club, Sun Willows Golf Course, Meadow Springs Golf and Country Club, Canyon Lakes Golf Course, Buckskin Golf Course, West Richland Municipal Golf Course, Columbia Point Golf Course, and Moses Pointe Golf Course). Charlotte Reep of the Lower Columbia Basin Audubon Society, many Audubon volunteers, D. Hearne, M. Hearne, C. Forristal, G. Grasso, G. Balmer, C. Sanders, A. Sanfacon, S. Millus, T. McLaughlin, and P. Ramey helped with burrow installation and monitoring.



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2002

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