

Best Management Practices for Addressing Open Vertical Pipes “Death Pipes”

*Preventing Wildlife Mortality through
Simple Field Solutions*



Photo by Dan Weisz

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This document is designed to provide recommendations on identification, amendment and future prevention of death pipes on the landscape.

Overview: What is a “Death Pipe”?

An open-top, vertical pipe (commonly used in fencing, signage, or utility infrastructure) poses a hidden but significant hazard to wildlife. These so-called death pipes can act as lethal traps for cavity-seeking animals. Birds investigating the interior as a potential foraging, nesting or roosting site may fall in and be unable to escape due to the pipe’s smooth, vertical walls. Similar risks apply to reptiles, small mammals, and invertebrates. Cavity-nesting birds are the most commonly affected, though any animals that fit in the hole are susceptible:

- **Birds:** flycatchers, bluebirds, woodpeckers, sparrows, shrikes, kestrels, owls
- **Reptiles and Amphibians:** lizards, snakes
- **Mammals:** rodents, bats
- **Insects:** bees, beetles and other cavity-seeking insects



Findings inside Death Pipes (clockwise from top left): owl, Jim Boone; Barn Owl, Mary Pendergas; Gila Woodpecker, Olya Weekley; side-blotched lizards, Jim Boone; Western pipistrelle bat, Jim Boone; tenebrionid beetles and giant hairy scorpion, Jim Boone

Assessment and Identification

Open vertical pipes serve a variety of functions and can be found in diverse settings, including private yards, parks, public lands, and other landscapes. Inspect the area and identify any pipes that may require attention. Horizontal pipes, as well as vertical pipes that are open at the bottom, are generally safe; however, use your best judgment when assessing each situation.

High-risk features include:

- Fence and gate posts
- Sign and trail marker supports
- Vault toilet vents
- Utility or irrigation infrastructure
- Abandoned or stored construction materials
- Mining claim or other site delineation markers

Recommended Solutions

Note: Use a high-powered flashlight or inspection camera (like an endoscope) to check for live animals before proceeding with mitigation.

1. Temporary Solutions

- To temporarily close open pipes using available materials, insert a tightly fitting rock or branch so it sits securely inside the opening.



2. Permanent Removal

- Remove abandoned or unnecessary vertical pipes completely.
- Lay down loose stored pipes horizontally to eliminate entrapment risk.



3. Capping Standard Fence Pipes

- Cap chain-link fence posts (typically 1.5" – 2.5" diameter) using metal fence post caps purchased at a hardware store or online.
- Plastic caps are not recommended due to poor performance in the elements.
- Ensure all caps are snug and weather-resistant.



4. Sealing Larger-Diameter Pipes / Large Number of Pipes

To cap bigger or more pipes on a budget, use this concrete capping method.

Materials:

- Cardboard/paper (stiff cardboard for 4-6 inch diameter pipes, stiff paper for <4 inch diameter pipes). For pipes larger than 6 inches, use metal mesh and pipe clamps as the base for cement (see #5 for the clamp method).
- Cement (one 60 lb bag of Quikrete is enough for ~40 five-inch pipes)
- Water (3.5 gallons for one 60 lb bag of Quikrete)
- Bucket for mixing cement
- Cement scoop and mixer (can use paint mixer drill attachment to mix)
- Trowel
- Rubber or nitrile work gloves
- Face mask

Safety and Handling Precautions:

- Use gloves when handling concrete.
- Avoid direct skin contact with wet cement
 - Keep a vinegar solution on-site to neutralize accidental exposure.
 - Rinse skin promptly with water if splashes occur.
- When mixing cement, avoid inhaling dust, work in well-ventilated areas, and use a dust mask.

Method:

- Use the provided amounts of materials as general guidance. Exact amounts of Quikrete and water vary with environmental conditions and personal approach.
- Mix cement for a “soft-serve” ice cream consistency. Not too dry, not too wet.
- Use a cardboard piece slightly larger than the opening to create a snug-fitting plug just below the top of the pipe.
 - Leave as little space as possible from the cardboard to the rim of the pipe to avoid using a lot of cement.
 - The plug has to only be strong enough to hold the cement while it dries
- Gently apply a scoop of cement over the opening, add more if needed to ensure the pipe is completely sealed. The rim must be fully covered.
- Leave to dry and set.



5. Maintaining Pipe Functionality

For pipes that must remain open for ventilation or drainage.

- Use ½-inch galvanized hardware cloth or metal mesh securely fastened with stainless steel pipe clamps. If using this method, make sure to inspect the cloth for degradation over time.
- Commercially manufactured wildlife-safe screens are also available at hardware stores and online.



- The Poo-Poo Project prevents wildlife entrapment in vault toilets throughout the US by installing safe and effective screens on the ventilation pipes. Purchase or request a donation here: tetonraptorcenter.org/poo-poo-project/



Other considerations

Any closure you choose must withstand UV exposure, moisture, and temperature extremes. Avoid using plastic materials that degrade over time. Regular inspections should be scheduled to ensure closures remain effective. Ensure any new construction uses capped pipes.

Death Pipes on Public Lands

- **Tucson Bird Alliance's Project Death Pipes in Southeast Arizona**

Tucson Bird Alliance is actively addressing the issue of open vertical pipes throughout Southeast Arizona. We encourage landowners and land managers to inspect their properties for these hazards and take steps to seal them using the recommended methods. If open pipes are found on public lands, they can be reported through our online form. For more information on the project and available resources, please visit: tucsonbirds.org/deathpipes.

- **Death Pipes Outside of Southeast Arizona**

If you encounter open-top pipes outside of Southeast Arizona, notify the appropriate land manager about the risks these structures pose to wildlife. Many landowners and managers are unaware of “death pipes” and are often receptive to learning about the issue and how to address it.

This guide can be accessed, printed and shared using the following link:
tucsonbirds.org/death-pipes-bmp



Preventing wildlife entrapment in death pipes is a simple yet highly effective way to reduce unnecessary mortality. Incorporating these best management practices into routine inspections, habitat restoration, and infrastructure installation ensures the landscapes we steward remain safe and functional for wildlife.



Thank you for your help!

