A Guide for Safe and Effective Rat Control

A safe home and garden fact sheet

Norway rats, or brown rats, are non-native pest rats that are found in Colorado and across the rest of the U.S. Rats commonly live along the banks of creeks and ditches, and can sometimes move into developed areas where people live and work. The following information provides detailed directions for effective and nontoxic control of rats that you can use to keep your home, business or property free of rats—or remove them after they've appeared.

Why are Rats Here?

- Homes and businesses provide everything a rat needs to survive – food, water and shelter.
- Rat reproduction peaks in the spring and in the fall. The average female rat has 20 or more offspring a year. Rats in cities and towns normally live for five to 12 months.
- Rats will eat any food that people or their pets consume. They may store hoarded food in walls, furniture and appliances. In cities, there is ample food from bird feeders, dog pens, vegetable gardens, chicken coops, garbage cans, dumpsters and compost piles.
- Unless disturbed, a rat colony may infest the same alley, basement or building year after year; construction and building renovations may cause them to disperse to other areas.

Prevent Rats From Becoming a Problem – How to Rodent-Proof Your Home or Business

Sanitation and exclusion (keeping pests from entering) are the most important ways to prevent a rodent infestation in the first place or to keep them from coming back once you treat a problem.

Take these steps to rodent-proof your home or business:
Manage exterior landscaping. Avoid low-lying shrubs and vines, such as creeping juniper, next to buildings and fences. Remove tree branches within five feet of the building. Mow tall grass and weeds. **Don't give rats a place to hide.**

Remove clutter both inside and outside the building. Remove boxes, rubbish and other debris that may have accumulated. Do not store firewood against house or a building. Remove old furniture, vehicles and appliances from your property. **Don't give rats a home.**

Manage food sources. Store large bags of dog food or birdseed in metal or heavy-duty plastic cans. Pick up pet food dishes at night. Secure compost piles and recycling bins so that they are inaccessible to rodents. Remove animal waste (feces) every day from your yard. Animal waste contains undigested pet food that rats will eat. **Don't provide food sources.**

Keep dumpsters and garbage cans clean and secure.

- Use a durable trashcan with a tight-fitting lid. Do not put out trash in plastic bags. Rats will chew through them and feast on your leftovers.
- Dumpsters should be of adequate size so that there is no overflow.
- There should be no leaks or breaks under or on the sides.
- Lid covers should be in place (and used).
- Drain plugs should be in place.
- Dumpsters containing food trash should be stored 25 to 50 yards from buildings.

Rat on bird feeder

Rodent proof houses, garages, sheds and other buildings by sealing any potential entrances. Conduct a detailed inspection of the building for entry points. A rat can enter an opening the size of its skull – ½ inch high and ¾ inch wide. In order to exclude both rats and mice, seal any hole larger than ¼ inch.

Potential entry points include garage doors, door thresholds, chimneys, exterior lines (electrical, water, gas) leading through walls, openings in building foundations and dryer vents. Make sure doors, windows and screens fit tightly. Coarse steel wool, copper mesh, wire screen and lightweight sheet metal are excellent materials for plugging gaps and holes. Rats are likely to gnaw away plastic sheeting, wood, caulking and other less sturdy materials. A relatively new product is being used to exclude rats in New York City (Xcluder Fill Fabric), which is a patented blend of poly fibers and stainless steel mesh that expands to fit securely in place after it has been installed in holes and crevices.

Do you have a rat problem?

Inspect your home, business, yard and surroundings. If you answer yes to one or more of the following questions, you may have a rat problem.

Do you see rats traveling along fences or walls? Rats forage for food mainly at dusk and again prior to dawn. But if the area is quiet and undisturbed, they may forage during the daytime. Have you found rat nests behind boxes or in drawers in the garage?

Have you seen rat droppings? Fecal pellets are ¾ inches long and ¼ inch in diameter, smooth, rectangular in shape, dark colored and usually found in small groups. Look for droppings (one rat produces 40 to 50 pellets a day) in a 100-foot radius around outside dog pens or areas used to store pet food, birdseed or chicken seed. Are there rat droppings in your recycle bins or in/around your garbage cans?

Have you seen burrows and/or digging? Rats live in subterranean burrows. Burrows are about 3 inches in diameter; the entrance looks compacted and smooth. An active burrow is free of cobwebs and debris. In urban and suburban areas, rats often burrow around buildings, beneath slabs and alongside building foundations. Junk and clutter on the ground, as well as areas with dense vegetation, are also favored. Look in these areas around both residential and commercial structures

- -Alongside walls of gardens raised using railroad ties
- -Beneath low-lying bushes
- -Along fence supports where dense vegetation (ivy, Virginia creeper, etc.) is covering fence
- -Under slab walkways
- -Under low-lying decks, along garage walls or storage sheds
- -Under compost piles or chicken coops

Are there smooth, well-packed "runways," such as worn-down paths in the grass? Runways are used between the nest and food source, and the average distance a rat travels from its nest is 25 to 100 feet. Rats usually travel along structural lines, such as a fence or wall. Indoors, rats prefer continual body contact with at least one vertical surface such as a wall near ground or floor level. Have you seen gnawing damage around openings – shallow, parallel grooves left by incisors? Each mark is about 4 mm in width.

"Rat runway" - from www.masonspestcontrol.co.uk

Are there defunct sewer system lines in your neighborhood?

Do you have woodpiles or wood stored on the ground? Have you noticed remnants of rat nests when stacking or unstacking firewood?

Are there rub marks caused by the rats rubbing their fur along wall/floor junctions and at regularly used openings?

Have you ever had to remove a drowned rat from your swimming pool or hot tub?

Have you heard gnawing, scrambling or squeaking noises in the walls? Is there a musky smell?

Example of rat burrow

Best Practices for Eliminating Rats—Use Snap Traps

Snap traps are lethal traps that quickly and humanely kill rats as they attempt to eat the bait. There are several advantages to using snap traps.

- They provide a quick solution to a rodent problems.
- Using traps will minimize the chances of decomposing rodent odors and fly problems.
- Most mechanical traps can be reused many times.
- They are nontoxic, which means they are less likely to harm the environment or other animals.

The least expensive option is the wooden snap trap, which looks like a standard mouse trap but is larger (see size comparison image on the next page); the single-kill plastic rattraps are easier to set and clean.

Using Traps Effectively

Although it takes patience and strategy, snap traps are an effective and nontoxic method to eliminate a rodent infestation. However, it is important that rat traps are used safely to ensure that people, particularly children, pets and non-target animals do not accidentally encounter the traps. When placing traps indoors, place traps in darkened corners, along walls or behind appliances and objects. If rat traps must be placed where kids or pets have access, place the snap trap in a tamper-resistant plastic or metal station, such as a Protecta bait station. Rats like a sheltered location, so these seem to have good results.

You may wish to hire a professional to install traps. But ensure that you understand the principles for effective trapping and don't assume that a pest control service will use these techniques unless you require it when you hire them.

If you choose to trap on your own property, follow these guidelines.

Rats are cautious of new objects. Place the trap(s) in the location where there is the most rodent activity. For example, if there is a hole in the floor or wall used by the rodents, place several traps in the area, but away from the opening. You can also place traps 8 to 12 inches away from runways. Avoid placing traps directly in the line of frequently used travel lanes.

Monitor areas where the rat might travel, such as runways or burrow openings. You can apply talcum powder to monitor suspected areas or use video cameras with low-light options and wide-angle lenses. These techniques may provide the clues needed to reveal the rat's secretive behavior. Some professionals have used thermal imaging devices to locate elusive rats in hard-to-reach areas.

Place rat traps about 10 to 20 feet apart. Use as many traps as are practical so trapping time will be short and decisive.

Place traps unset and baited for 2 to 3 days prior to setting the traps. Place baits in a small trail leading toward the snap trap, as well as on the edges of the trap. This lets the rat associate food with the new object.

Place different kinds of bait in traps. Divide up the traps with meats, peanut butter or even nesting material, such as soft strips of cloth. If rats are not attracted to the trap, try enticing them with a gourmet option, such as fresh meat or shrimp.

In a building, place traps along a wall so that they extend from the wall at right angles, with the trigger end nearly touching the wall. Rats like to touch surfaces, like a wall, when they move.

Whenever possible, eliminate the rat's regular food source. Remember that rats are wary of new things, so, if there is abundant food elsewhere, it is not likely to try "new" food in a trap.

For personal hygiene, wear disposable gloves when installing or recovering any animal traps. However human odors on traps are not likely to deter most rodents.

If these steps are followed carefully, the majority of rats will most likely be caught on the first night. Install many traps at the beginning. Continue trapping for three to four more nights and continue watching for signs of rats.

Make sure that you rodent-proof your property and follow the guidelines for removing food and shelter to prevent another

Trapping is an effective tool if used correctly.
Glue traps and live traps are not recommended for the following reasons:

- Glue traps are not effective for trapping rats. Rats caught in glue boards may struggle and drag the trap around. Glue traps can also capture birds and other non-target wildlife.
- Live traps are not recommended because trapped rats must be either humanely killed or released elsewhere. Rats are not native to the United States, and their presence in the wild is detrimental to native ecosystems, especially birds. **It is against the law to release rats on OSMP property.**
- Other approaches that are not effective and should be avoided include ultrasonic machines and moth flakes (e.g. naphthalene).

Avoid poison baits - see the next page to learn why.

The Dangers of Rat Poison

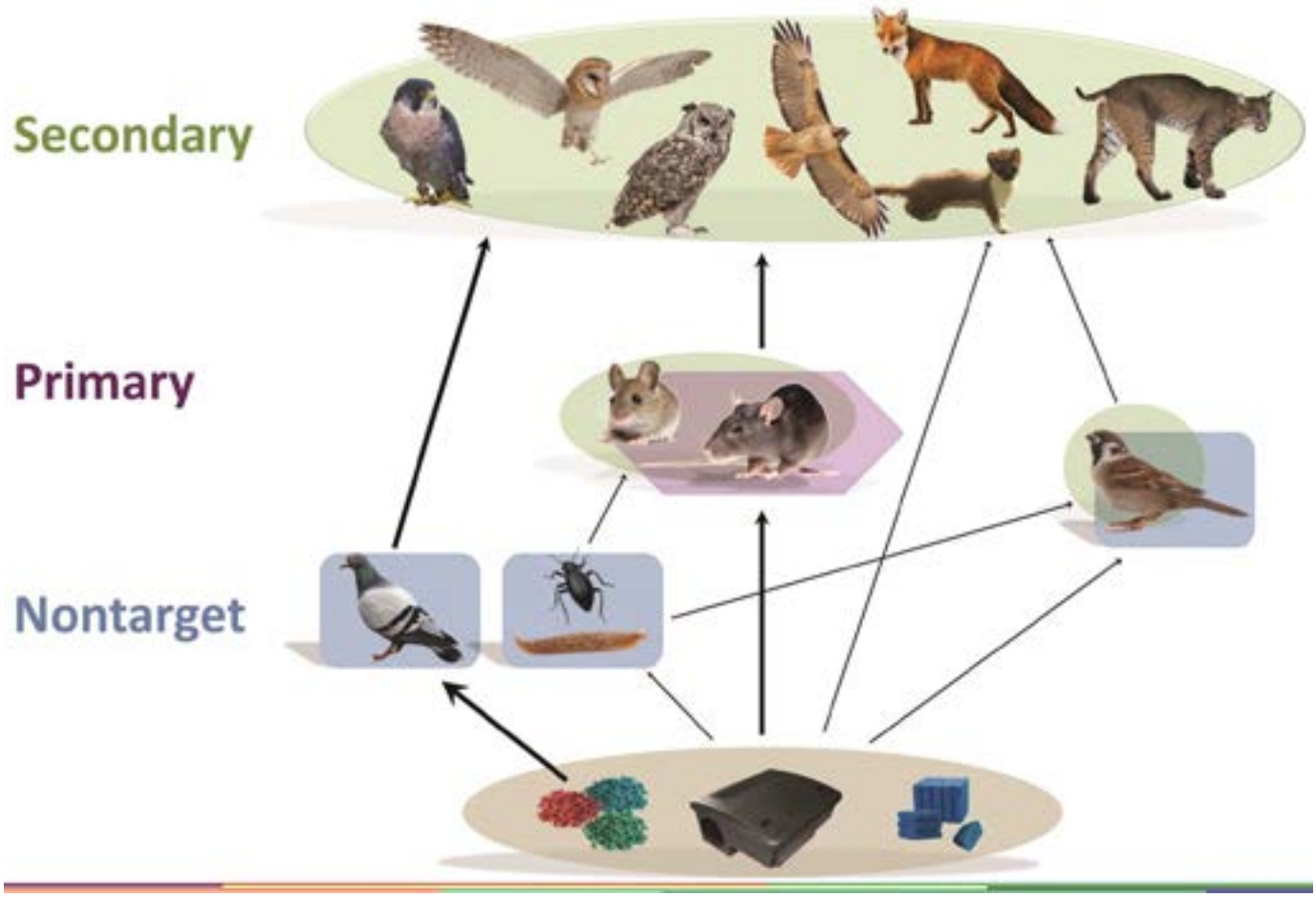
Risks to children, pets and wildlife

Poison baits or rodenticides (pesticides that kill rodents) are dangerous to children, pets, and non-target animals such as hawks, owls and other birds of prey, coyotes or bobcats, mountain lions, foxes and other wildlife.

Rodenticides can harm pets or wildlife by **secondary poisoning** - a pet or animal that eats a poisoned rat is also poisoned. Rodenticides are applied as a bait, which contains an attractive food laced with the poison. Rodent baits can be dangerous to children, pets or non-target animals from **direct ingestion** of the bait. Bromethalin is one type of rodenticide that poisons the central nervous system. Most other rodenticides are blood-thinning drugs called anticoagulants.

Anticoagulants damage capillaries and result in fatal internal bleeding. They are used at low levels and the onset of symptoms is delayed for several days. This usually results in the animal dying many days later at an unknown location, including inside buildings or in burrows. The stench of a dead rat in a building may require drilling a hole in a wall to remove the carcass. If not removed, the carcass can also attract flies, but the odor will usually disappear on its own in about a month.

Second-generation anticoagulants are generally used because they persist longer in the rodent's body than first-generation anticoagulants. Anticoagulants have the same effect on nearly all warm-blooded animals. Dogs are more susceptible than many other mammals. Vitamin K1 is the antidote for anticoagulant rodenticides, although in cases of severe poisoning, whole blood transfusion is also used. Other rodenticides, such as the neurotoxin bromethalin, have no antidote or treatment.



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