

# Prairie Dogs

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Figure 1. Black-tailed prairie dogs (*Cynomys ludovicianus*) are the most common prairie dog species.

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## Human-Wildlife Conflicts

Prairie dogs (*Cynomys* spp.) occur throughout the prairie states of middle North America from Mexico northward into Canada. They occupy a variety of habitats from prairies to high mountain valleys and sage brush-dominated deserts. The most common species is the black-tailed prairie dog (*Cynomys ludovicianus*; Figure 1).

Prairie dogs are considered a “keystone species.” They provide habitat for many other native, grassland species. Prairie

dogs live in colonies or “towns” that can span hundreds to thousands of acres. Depending on the species, their presence is evident by their burrow system.

Despite the many ecosystem benefits prairie dogs provide by modifying grasslands, they also create conflicts with people when their activities cause damage. This damage can occur on agricultural lands, as well as in urban and suburban settings.

### *Agriculture and Livestock*

Prairie dog damage to agricultural crops can occur when a colony exists in or near cropland, such as alfalfa, hay fields, vineyards, orchards, or Christmas tree plantations.

On pastures and grazing lands, prairie dogs can compete with livestock for forage. How much of this occurs and how serious it is, depends on many factors that vary with the specific situation. Although rare, horses or cows can be injured when they step into a prairie dog burrow opening. Occasional damage to farm equipment can occur when the equipment strikes a burrow mound or repeatedly runs over the uneven soil surface.

### *Human Health and Safety*

Like many rodents, prairie dogs can be infected by and transmit disease agents to other animals, pets, and people. The most serious of these is sylvatic plague, caused by the bacteria *Yersinia pestis*. People and pets can get plague after being bitten by a rodent flea that is carrying the plague bacterium. People should not handle plague-infected animals to avoid potential flea bites.



Figure 2. Black-tailed prairie dog colony in Colorado.

Prairie dogs will quickly succumb to plague, though they may not appear sick during the early stages of infection. It is estimated that more than 90 percent of prairie dogs in infected colonies die within weeks to several months. The loss of a prairie dog colony over the course of a few weeks, in absence of human control, may indicate the presence of plague.

Prairie dog burrow systems can cause injuries to people when people step into burrow holes, especially at parks, athletic fields, and other recreational sites.

Prairie dogs cause an indirect threat to aviation safety by attracting birds of prey and large predators to airports, making those species vulnerable to collisions with aircraft.

### *Landscapes*

Burrowing prairie dogs cause erosion and loss of water in some areas by weakening levees or dams leading to seepage or dam failure. They can also damage vegetation in developed areas and affect plant species diversity and abundance in more natural areas.

### *Property and Nuisance Issues*

Prairie dog burrowing and burrows can undermine structures and roadbeds, causing damage. The animals can also gnaw through underground cables and irrigation tubing.

## **Damage Identification**

Prairie dogs live in colonies and their presence, depending upon the species, is evident from the burrow openings and the soil mounds surrounding them (Figure 2). Prairie dogs not only clip vegetation as forage, but also to maintain a more open landscape so they can see approaching predators. As such, areas occupied by prairie dogs usually have sparse vegetation. Prairie dogs may also gnaw on tubing, cables, or young trees and shrubs.

## Management Methods

Utah and Mexican prairie dogs are listed as threatened or endangered species and are protected by law. Contact the State wildlife agency and/or the U.S. Fish and Wildlife Service (USFWS) for specific requirements and options regarding damage management methods for these species. If a prairie dog colony contains endangered black-footed ferrets (*Mustela nigripes*), options for prairie dog control are more restricted.

Responsible and professional reduction or elimination of wildlife damage is the goal of wildlife damage management practitioners. This is best accomplished through an integrated approach. No single method is effective in every situation, and success is optimized when damage management is initiated early, consistently, and adaptively using a variety of methods. Because the legality of different methods varies by State, consult local laws and regulations prior to implementing any method. In addition, regulations may require that a survey be conducted to determine if threatened or endangered species are present.

***For a summary table of prairie dog management methods, please see the Appendix.***

### *Habitat Modification*

Because black-tailed prairie dogs prefer short vegetation, they can be discouraged from occupying certain areas by restoring native prairie grasses or planting agricultural crops, such as milo. On grazing lands, black-tailed prairie dogs can be managed to some extent by rest and rotation grazing practices, and limiting livestock abundance to maintain vegetation height.

It is important to note that prairie dogs may disperse up to two miles to find new habitat and will clip tall grasses to make an area more suitable for prairie dogs.

### *Disease Management*

Plague prevention and treatment in prairie dog colonies includes treating burrows with pesticides to control fleas and administering an oral plague vaccine to prairie dogs.

Pesticides are an important component of integrated wildlife damage management, and their use is regulated by Federal and State laws. All pesticides used in the United States must be registered by the U.S. Environmental Protection Agency (EPA) under the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act, as well as the appropriate State agency. Registered pesticides must be used in accordance with label directions. Some pesticides can only be applied by persons who have been specially trained and certified for their use. Each of the chemical methods listed below have specific requirements for their handling, transport, storage, application, and disposal.

The most widely used pesticide (insecticide) for controlling fleas is deltamethrin. It is applied to prairie dog burrows, usually with specialized machinery (Figure 3). Grain baits that are non-toxic to prairie dogs but contain an insecticide (either imidacloprid or fipronil) are also registered for controlling fleas in prairie dog colonies.



**Figure 3.** Prairie dog burrows are dusted with a pesticide to kill fleas that carry sylvatic plague. This protects prairie dogs, people, and other wildlife, such as endangered black-footed ferrets that rely on prairie dogs for food and are highly susceptible to plague.



Figure 4. Oral plague vaccine bait for prairie dogs (approximately 0.4 inches (1 cm) in diameter).

An oral plague vaccine for prairie dogs, which is a veterinary biologic, is authorized for sale and use under an indefinite conditional license by the USDA-APHIS Veterinary Services' Center for Veterinary Biologics (Figure 4). The vaccine was developed by the U.S. Geological Survey and the University of Wisconsin-Madison. It is licensed to the Colorado Serum Company where the bulk vaccine is manufactured. The oral plague vaccine baits for prairie dogs are manufactured by (and can be purchased from) the USDA-APHIS Wildlife Services' Pocatello Supply Depot. In field trials from 2013 to 2015, prairie dog abundance and survival were higher on vaccine-treated plots versus untreated plots during plague outbreaks, suggesting that the oral plague vaccine baits provided some protection to prairie dogs against plague.

### *Encourage Predation*

It is possible to encourage natural predation on prairie dogs (Figure 5). Artificial perches for hawks and eagles can be erected in or near prairie dog colonies. These can be effective at increasing raptor presence since natural perches are often limited in grasslands and prairies. Nesting by these birds can be encouraged by attaching nest boxes or platforms to the perches. Because birds of prey may also feed upon native birds which have evolved on prairies where natural perches are limited, it is important to consider the potential negative impacts of this method to other prey.



Figure 5. It is possible to encourage natural predation on prairie dogs by erecting artificial perches and nest platforms for hawks.

To encourage mammalian predators (e.g., foxes, coyotes) to hunt in prairie dog habitat, place objects, such as hay bales or vegetative debris, near colonies to provide cover and hiding places.

### *Exclusion*

The main exclusion device used for prairie dogs is fencing. It is generally used to prevent the expansion of existing prairie dog colonies. Fences can be made from a variety of materials (e.g., course fabrics, plastic; Figure 6) but they must be applied both above and below ground, especially since prairie dogs can dig several feet underground. Unfortunately, barriers are expensive to install and maintain, and some materials do not weather well over time. Additionally, some prairie dogs may find a way through, under, over, or around the barriers. Vegetation barriers made of shrubs and tall grasses have also been used but are often breached or difficult to maintain.

### *Fertility Control*

In March 2022, the EPA registered the pesticide product "GonaCon–Prairie Dogs" (EPA Reg. No. 56228-64). It is an immunocontraceptive vaccine for reducing fertility in sub-adult or adult female black-tailed, white-tailed, and Gunnison's prairie dogs. Laboratory and field studies by



Figure 6. Plastic barriers can be used in urban areas to help prevent the expansion of prairie dog colonies but must be consistently maintained.

USDA-APHIS Wildlife Services showed that GonaCon–Prairie Dogs controls female fertility for at least one year.

The product must be hand injected and may only be used in prairie dog colonies that occur in urban and suburban areas, open spaces and natural areas, parks, campgrounds, airports, roadway medians, and other non-crop use sites. The product can be administered by USDA-APHIS Wildlife Services employees or State wildlife management agency personnel, or persons working under their authority.

### *Frightening Devices*

Frightening devices, such as noise makers, sonic ground repellents, sulphur gas smokers, and predator decoys, are not practical nor effective for prairie dog management. While they may initially work, many mammalian species, including prairie dogs, quickly acclimate to them, rendering them ineffective.

### *Relocation*

Capturing and moving animals (also known as relocation) is rarely legal nor is it considered a viable solution by wildlife professionals for resolving certain wildlife damage problems. Reasons to avoid relocating wildlife include legal restrictions, disease concerns, liability issues associated

with injuries or damages caused by a relocated animal, stress to the animal, homing behavior, and risk of death to the animal. Check State and local regulations before considering relocation.

In some settings, prairie dogs can be live-trapped and relocated to a site where they are desired or will not cause damage. This activity is regulated by State wildlife agencies and/or county commissioners. There are recommended steps to follow before relocating prairie dogs. These include preparing the receiving site before releasing animals. If old burrows are not at the site, “starter” burrows can be dug into the ground. Additionally, it may be necessary to monitor and manage potential predators (e.g., foxes, coyotes) before the release.

### *Repellents*

No repellents are registered for use with prairie dogs.

### *Shooting*

Shooting can be used to help manage prairie dog numbers. It is important to check with State wildlife agency staff and local authorities to ensure that shooting is legal in the area. Shooting is done mainly in rural areas and is much more regulated, if not restricted, in urban, suburban, and industrial areas. Shooting may not be practical or cost-effective in many situations.

Generally, .22 caliber or larger rifles are used. Accuracy and effectiveness can be increased by using tripods, shooting benches, telescopic sights, and/or spotting scopes. An advantage of shooting over the use of toxicants or fumigants is that it is species-specific and non-target animals are not at risk. However, prairie dogs may become wary and spend much more time in their burrows.

### *Toxicants*

There are two categories of toxicants registered by EPA for prairie dog control: oral toxicants and burrow fumigants. Toxicants are carefully regulated by State and Federal agencies. Label requirements must be strictly followed.



Figure 7. Plain grain (left) and zinc phosphide coated grain (right).

Prairie dog toxicants are restricted use pesticides (RUPs), except for gas cartridges, and can only be used by certified pesticide applicators.

#### Oral Toxicants

Oral toxicants for use with prairie dogs include the acute toxicant zinc phosphide and the first-generation anticoagulants, chlorophacinone and diphacinone. All of them are RUPs.

The EPA-approved labels require pre-baiting with untreated grain before using the acute-acting or single-feeding zinc phosphide products. This is to get the prairie dogs accustomed to eating grain and to prevent “bait shyness.”

Zinc phosphide baits are commonly used on large colonies covering greater than 25 acres (10 hectares) and are registered in two general bait forms. One bait form includes grain-based compressed pellets containing 2% zinc phosphide. The other form includes coated whole grain baits (mostly oats, but also other whole grains are used; Figure 7). Coated grain baits containing 2% zinc phosphide are available commercially or mixed by applicators. This involves mixing the grain with mineral oil and zinc phosphide concentrate so that the final concentration of the toxicant on the grain is ~2% by weight. One tablespoon of zinc phosphide treated oats is typically

placed near, but not on, the prairie dog burrow mound. Hand applications also may be used while riding an all-terrain vehicle over large colonies. Treated grain is placed near each mound in the colony that shows fresh prairie dog sign, such as tracks and fecal droppings.

Generally, zinc phosphide baits are applied in late summer or fall when natural forage starts to brown and dry up, and the rodents are more attracted to seed and grain.

Anticoagulant baits come as coated grain formulations either containing the active ingredient chlorophacinone at 0.005%, containing the active ingredient diphacinone at 0.005%, or containing 0.0025% diphacinone when combined with the insecticide imidacloprid for flea control. The EPA-approved labels require that these baits be placed inside the burrows of prairie dogs at least 6 inches below the surface. About ¼ cup of bait is placed in each burrow showing fresh signs of prairie dog presence/activity. Pre-baiting with non-toxic grains is required. Anticoagulant products can be used only from October 1 through March 15.

The use of oral toxicants for rodent management can pose hazards to non-target animals. Primary hazards occur when the non-target animal eats the bait. Secondary hazards occur when a non-target animal eats a dead or dying prairie dog that has been poisoned. When oral toxicants are used, most prairie dogs die within their burrow system. While relatively rare, some may die on the surface. These carcasses pose a secondary hazard to non-target animals that might eat them. This is especially true when anticoagulant rodenticides are used since the active ingredient can persist for some time in tissues. As such, it is recommended that a few days after a baiting operation, field crews search for carcasses in the treated area and bury the carcasses or remove and incinerate them. Additionally, oral toxicant use is not allowed if livestock are grazing in the area.

#### Fumigants

Burrow fumigants are another type of toxicant for prairie dogs. Products include gas cartridges or pellets/tablets/bags.

Fumigants are not target-specific. They require more effort and are more costly than oral toxicants. It is generally assumed that all vertebrates in the burrow are killed when burrow fumigants are used.

Gas cartridges have a long history of being used for prairie dog management as well as some other burrowing mammals. There are two gas cartridge products currently registered for prairie dog control. Both are classified as general use (not restricted use) products containing 53% sodium nitrate, 28% charcoal (containing carbon), and 19% inert ingredients. The sodium nitrate and carbon react to produce primarily carbon monoxide along with other lethal gases in minor quantities when ignited. A cartridge is lighted, placed as deep as possible within the prairie dog burrow, and the burrow opening is sealed using rocks, soil and/or newspaper. Death occurs when the lethal gases are inhaled.

The Gas Cartridge (EPA Reg. No. 56228-61) can be used by any person 16 years old or older according to the label. The APHIS-Only Gas Cartridge (EPA Reg. No. 56228-2) can only be used by USDA-APHIS Wildlife Services applicators (Figure 8). Information on registration status and availability of these products in individual States may be obtained from the respective State's pesticide regulatory agency and USDA-APHIS Wildlife Services.

Aluminum phosphide and magnesium phosphide fumigant products are pellets/tablets/bags that are placed in the burrow. The burrow is then sealed. Product placement inside the burrow can be facilitated by using a polyvinyl chloride (PVC) pipe. Insert the pipe deep into the burrow and deliver the products by dropping them into the pipe. Aluminum phosphide and magnesium phosphide products release highly toxic hydrogen phosphide or phosphine gas. Burrow fumigation with these active ingredients is most effective after precipitation or irrigation when soil moisture levels are high. This activates the chemicals (i.e., converts them to toxic gases) and keeps the gases in the burrow. These products are restricted use pesticides and can only be used by certified pesticide applicators. Applicators must follow all pesticide label requirements.

## Trapping

Trapping can be used in some settings to manage prairie dog populations. Trapping rules and regulations vary by State. Consult local laws and regulations prior to using any traps. Trapping is generally considered too expensive and time consuming to be effective for long-term prairie dog management.

Trapper training may be required prior to receiving a trapper's license and actively trapping. Check with the State wildlife agency for requirements and training opportunities. If none exist, the Association of Fish and Wildlife Agencies and some States offer online training.

Live trapping of prairie dogs involves cage traps, such as box traps (Figure 9). The traps are baited with a grain, such as oats. The grain can be flavored with corn oil or anise oil.



Figure 8. A USDA-APHIS Wildlife Services employee prepares a gas cartridge for use on a prairie dog burrow.



Figure 9. Black-tailed prairie dog in a live cage trap.

It is often recommended that the door of the trap be wired open and the trap pre-baited for a few days before the trap is set to capture a prairie dog. This allows prairie dogs to become comfortable with visiting the traps. Captured prairie dogs can be immuno-contracepted and released, euthanized, or relocated to another site in some situations. Check with local authorities or the State wildlife agency for available options.

Lethal trapping with body gripping traps can be used to manage prairie dogs (Figure 10). Check with local authorities or the State wildlife agency for available options. The trap is set and then placed over the burrow opening. When the prairie dog enters or leaves the burrow, it triggers the trap in a manner similar to mouse traps, causing the two rotating jaws to close quickly, striking the animal's neck or chest and leading to death.

### *Handling and Euthanasia*

Wear protective equipment (i.e., gloves, safety glasses) when handling live or dead prairie dogs. Avoid contact with claws, teeth, blood, saliva, urine, or feces. Wear a long-sleeved shirt, long socks, and long pants to avoid flea bites.

When working with a live-captured prairie dog, move slowly and deliberately. Speak in a calm voice to reduce stress on



Figure 10. Body gripping trap placed over prairie dog burrow entrance. State laws must be followed when using this method.

the animal. Keep a live prairie dog cool or in a shaded area to avoid heat-related injury.

The American Veterinary Medical Association provides guidelines for euthanizing small mammals. Generally, vertebrates are euthanized with the use of carbon dioxide (CO<sub>2</sub>). Some veterinarians prefer that the animals are first anesthetized with isoflourane before the use of CO<sub>2</sub>.

### *Disposal*

Follow local and State regulations regarding carcass disposal. In some disease-related cases, deep burial or incineration may be warranted. When removing prairie dogs with restricted use pesticides, follow label instructions for proper carcass disposal. Care must also be taken with the disposal of carcasses that contain euthanasia drugs. Deep burial or incineration is required to avoid secondary hazards to animals that may feed on the carcass.

## Economics

There are relatively few publications on the economic costs associated with prairie dog damage. This may be because most damage is localized and not overly costly. Commonly damaged items include landscaping and gardens; underground cables and tubing; and the structural integrity of roads and airport runways.

The loss of forage on grazing lands and, to a lesser extent, the loss of lands for agricultural crops, are the main economic costs associated with prairie dogs. Livestock forage production can be reduced by as much as 50% from prairie dog foraging and clipping of vegetation to maintain an open landscape. In Nebraska, annual losses of livestock forage from prairie dogs were estimated near \$20 million per year from 2015 to 2018.

The economic benefits of prairie dogs as a keystone species in prairie ecosystems are currently unknown. However, the unique conditions they maintain provide necessary habitat for many plant and animal species, including rare and endangered species, such as mountain plovers (*Charadrius montanus*), burrowing owls (*Athene cunicularia*), and black-footed ferrets.



Figure 11. The Utah (*pictured*) and Mexican prairie dogs are listed under the Endangered Species Act as threatened and endangered, respectively.

## Species Overview

### Identification

Prairie dogs are rodents belonging to the genus *Cynomys*. They are in the Family Sciuridae and the Order Rodentia. They mainly occur in the grasslands and prairies in central North America from Mexico north to Canada. There are five species of prairie dogs that occur in North America: the black-tailed (*Cynomys ludovicianus*; Figure 1), Gunnison's (*C. gunnisoni*), Mexican (*C. mexicanus*), Utah (*C. parvidens*; Figure 11), and white-tailed (*C. leucurus*). The most abundant and widespread of these species is the black-tailed prairie dog.

### Physical Description

Prairie dogs are stocky rodents with rounded ears and short limbs and tails. They use their muscular limbs and sharp claws for digging. Prairie dogs have rather coarse fur that is generally sandy-brown or cinnamon in color. The fur has black and buff-colored tips. The belly fur is generally white or light cream-colored. The black-tailed and Mexican prairie dogs have black-tipped tails, whereas the white-tailed, Gunnison's, and Utah prairie dogs have white-tipped tails. The black-tailed prairie dog is the most common prairie dog species and is somewhat larger than the other species. Adults weigh about 2 to 3 pounds (lbs) (0.9 to 1.4 kilograms (kg)) and are about 14 to 17 inches (36 to 43 centimeters (cm)) in length.

### Range

Black-tailed prairie dogs once ranged over much of the grasslands of central North America. It has been estimated that they historically occupied as much as 104 million acres. However, their range has greatly diminished due to land use changes and control efforts. It has been estimated that black-tailed prairie dogs now occupy about 2.4 million acres in 11 states in the United States, and parts of Mexico and Canada (Figure 12). New laws and regulations, conservation efforts, and a reduction in the use of damage management methods, including toxicants, has helped prairie dogs to reestablish in parts of their historical range.

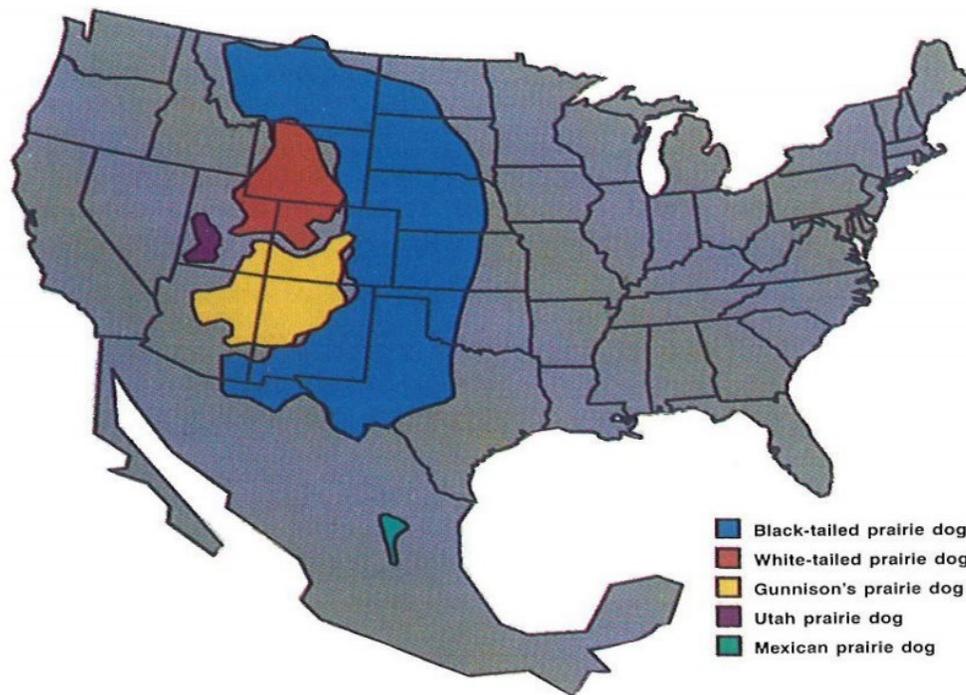


Figure 12. Estimated range maps for five prairie dog species.

Less is known about the historical range of the other prairie dog species. Currently, the white-tailed prairie dog ranges from extreme southcentral Montana, through Wyoming into western Colorado, and northeastern Utah. Gunnison's prairie dogs occur in northern Arizona, southwestern Colorado, northwestern New Mexico, and extreme southeastern Utah. The Mexican prairie dog is only found in Mexico and the Utah prairie dog is only found in southern Utah.

### *Tracks and Sign*

Prairie dogs, especially black-tailed prairie dogs, are obvious because they are active during the day and there are numerous burrow openings and mounds scattered throughout their colonies. Paths may be seen where they travel frequently between burrow openings. Clipped vegetation is also evident throughout the colony.

Tracks and fecal pellets can be seen around burrow openings. Tracks are about the size of a quarter dollar with long claws on front prints. Front prints only show 4 of the 5 toes, while all 5 of the toes are visible on hind prints. Fecal pellets are small and oblong, measuring about 0.1 to 0.2 inches (0.3 to 0.5 cm) in length. They can often be connected by narrow filaments to create a cord five to six times longer than wide.

### *Voice and Sounds*

Prairie dogs are very social. When they are above ground, they are often chattering or chirping. When they are frightened, such as when they detect a predator, they make a "barking" alarm call, and all nearby individuals will scramble into their burrows. They usually stay underground for a few minutes before slowly and cautiously emerging again. The "barking" call is why the French fur-trappers from the 1700s and 1800s called them prairie "dogs."

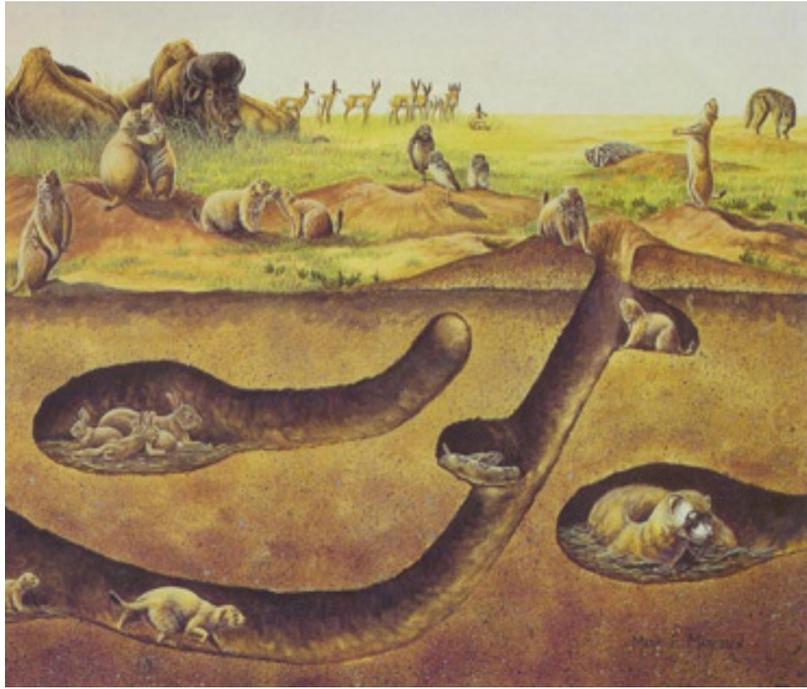


Figure 13. Artistic representation of prairie dog burrow system.

### *Burrows*

Prairie dogs have extensive burrow systems (Figure 13). There are usually about 20 to 50 burrow entrances per acre (50 to 125 burrow entrances per hectare), depending on the species. Burrows are usually about 3 to 6 feet (0.9 to 1.8 meters (m)) deep and may extend about 15 feet (4.6 m) underground. When constructing a burrow, they push soil to the surface which forms a mound around the burrow entrance. The mound consists of compacted soil and can be up to 2 feet (0.6 m) high. The mound provides a lookout station for the prairie dogs where they can watch for approaching predators. The mound also prevents water from entering the burrow and may help with burrow ventilation.

Prairie dog burrows are used by many other animal species, such as rabbits, skunks, small rodents, black-

footed ferrets, reptiles, and various invertebrates.

Burrowing owls often occur in prairie dog colonies and use the burrows for safety and nesting.

### *Reproduction*

Prairie dogs reach sexual maturity in their first or second winter, depending on the species. Unlike rats and mice, they only breed and bear young once a year. Breeding occurs in January or March; later in more northern locales. The females bear up to 6 young after a gestation period of about 34 days. The young are born hairless, blind, and helpless. They remain in the burrows for about 6 weeks before emerging. This is usually in May or June, and they are weaned shortly thereafter. They are nearly full grown by the end of their first fall.

### *Mortality*

Young prairie dogs have high survival rates and adults can live 5 to 8 years. The main source of mortality is predation. Predators include foxes, black-footed ferrets, coyotes, badgers, weasels, along with hawks and eagles. Snakes mainly kill young prairie dogs. Other sources of mortality include roadkill, starvation, weather, parasites, and disease. Prairie dogs are very susceptible to plague.

### *Population Status*

Prairie dog colonies generally do well unless their habitat is greatly modified or developed, or control measures are applied. Contact State wildlife and agriculture agencies for population information regarding specific colonies.

### *Habitat*

Prairie dogs are found in prairies and grasslands throughout central North America. They prefer open areas with low vegetation. They avoid shrubby or forested areas. Heavy grazing by bison (*Bison bison*) or cattle creates good habitat for prairie dogs. Once established, the prairie dogs themselves can maintain the short vegetation by their foraging and clipping of plants. Colony density depends upon the quality of the habitat. Colonies can expand if quality habitat is not too far away and is found by dispersing individuals.

### *Behavior*

Prairie dogs are very social animals that live in colonies. A colony is comprised of numerous extended family groups called “coterie.” A coterie consists of an adult male, several (usually 3 to 4) adult females, and their offspring.

Female offspring often remain with the coterie, whereas male offspring will usually disperse once they are 1 to 2 years old. After dispersing, males will form their own coterie. Prairie dogs are often observed grooming each other, playing, and chasing each other. The adult male of the coterie will chase away other males trying to invade his coterie.

Prairie dogs are active during the day (diurnal) and spend the night in their burrows. Black-tailed and Mexican prairie dogs are active all year round, but may stay in their burrows for several days during severe winter weather. They may also stay in their burrows during the hottest part of the day in the summer. White-tailed, Gunnison’s, and Utah prairie dogs are obligate hibernators.

### *Food Habits*

Prairie dogs prefer to eat grasses, but will also eat some forbs. More forbs are eaten in the fall and winter once the grasses wither and decline. Prairie dogs also eat some invertebrates, such as insects.

When foraging, prairie dogs clip plants close to the ground. This maintains good visibility for the prairie dogs so that they can watch for approaching predators.

Prairie dogs can go for long periods without drinking water directly because they obtain moisture from the vegetation they eat.

## **Legal Status**

Some prairie dog species are considered “unprotected” or “nuisance” species. In situations where they cause damage, they can be controlled or killed without a permit or license. Many States require people to obtain a small game license before shooting prairie dogs.

Utah and Mexican prairie dogs are listed as threatened or endangered species and are protected by law. Contact the State wildlife agency and/or the U.S. Fish and Wildlife Service for specific requirements and options regarding damage management for these species.

## Acknowledgements

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Figure 2. Photo by USDA-APHIS Wildlife Services Gail Keirn  
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Figure 13. Graphic by National Park Service

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## Glossary

**Bait shyness:** When an animal will no longer eat toxicant bait because it associates the bait with the ill feelings. This may happen after an animal eats a nonlethal dose of the bait.

**Coterie:** Prairie dog family group consisting of an adult male, several (usually 3 to 4) adult females, and their offspring

**Diurnal:** Active only during the day.

**Forb:** a non-woody flowering plant other than a grass.

**Keystone species:** A species that modifies the environment to the benefit of other species.

**Obligate hibernator:** A species that spontaneously enters hibernation each year regardless of ambient temperatures and access to food.

**Plague:** A disease caused by the bacteria *Yersinia pestis* which can cause illness or death in many species of animals, including people and pets.

## Keywords

Prairie dogs, Keystone species, Colonies, Coterie

## Disclaimer

Wildlife can threaten the health and safety of you and others in the area. Use of damage prevention and control methods also may pose risks to humans, pets, livestock, other non-target animals, and the environment. Be aware of the risks and take steps to reduce or eliminate those risks.

Some methods mentioned in this document may not be legal, permitted, or appropriate in your area. Read and follow all pesticide label recommendations and local requirements. Check with personnel from your State wildlife agency and local officials to determine if methods are acceptable and allowed.

Mention of any products, trademarks, or brand names does not constitute endorsement, nor does omission constitute criticism.

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## Appendix

### Damage Management Methods for Prairie Dogs

Type of Control	Available Management Options
Habitat Modification	Maintain tall vegetation or grain crops to prevent prairie dog expansion
Disease Management	<ul style="list-style-type: none"> <li>• Spraying for fleas in and near prairie dog burrows to prevent sylvatic plague (e.g., deltamethrin insecticide)</li> <li>• Non-toxic grain bait with insecticide (e.g., imidacloprid, fipronil)</li> <li>• Oral plague vaccine bait</li> </ul>
Exclusion	<ul style="list-style-type: none"> <li>• Fencing</li> <li>• Tall vegetation</li> </ul>
Fertility Control	GonaCon-Prairie Dogs (EPA Reg. No. 56228-64); May require State permits
Frightening Devices	Limited long-term effectiveness
Relocation	May requires appropriate Federal and/or State permits
Repellents	None registered for use with prairie dogs
Shooting	May require use of non-toxic/non-lead ammunition and/or allowed with proper Federal and/or State permits
Toxicants	<ul style="list-style-type: none"> <li>• Zinc phosphide</li> <li>• Chlorophacinone</li> <li>• Diphacinone</li> <li>• Fumigants—Gas cartridges (EPA Reg. Nos. 56228-61 and 56228-2) ; Aluminum phosphide and magnesium phosphide pellets/tablets/bags</li> </ul>
Trapping	Cage traps and body-gripping traps; May require Federal and/or State permits
Vaccine	Oral plague vaccine bait manufactured by USDA-APHIS Wildlife Services in partnership with Colorado Serum Company