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# MEMORANDUM

DATE: February 28, 1996 5400.1

TO: L. E. Woods, Ecology, Bldg. T130C, X3378

FROM: *M.B. Murdock*  
M. B. Murdock, Ecology, Bldg. T893B, X3560

SUBJECT: STATUS OF MANAGED AND PROTECTED WILDLIFE AT ROCKY FLATS  
ENVIRONMENTAL TECHNOLOGY SITE - MBM - 018 - 96

Attached is the draft final report entitled "Status of Managed and Protected Wildlife at Rocky Flats Environmental Technology Site." This report of one of a series of such reports being prepared for ecological resources at the Site. Please return your comments on this draft as soon as possible to allow preparation of the final draft.

Should you have questions or require further information, please contact me at extension 3560.

MBM:mbm

Attachment:  
As Stated

cc:  
 C. S. Evans  
 J. D. Krause  
 ERPD Records File (2) ✓



ADMIN RECCRD

SW-A-004205

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Attachment 1  
MBM - 018-96  
February 28, 1996  
8pp.

# DRAFT

## STATUS OF MANAGED AND PROTECTED WILDLIFE AT ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

### Managed and Protected Wildlife

Many of the wildlife species at Rocky Flats Environmental Technology Site (Site) are managed and protected only by the State of Colorado, while others are managed and protected under both state and federal authority. Colorado wildlife management and protection authority is exercised under **Colorado game laws and regulations** that provide the rules used to manage game species, and the **Colorado Nongame, Threatened, and Endangered Species Conservation Act** (CRS 33-1-115, 33-2-101 to 33-2-107) which protects nongame species. These laws and regulations give protection to wildlife in **addition to federal acts** that apply. Federal acts that provide federal authority to manage and protect wildlife at the Site are the **Migratory Bird Treaty Act** and the **Endangered Species Act**. The implications of these federal acts are discussed in more detail in other summary documents titled "Status of Migratory Birds at Rocky Flats Environmental Technology Site" and "Status of Threatened and Endangered Species at Rocky Flats Environmental Technology Site."

While this paper is a discussion of how wildlife found at the Site is protected under game and nongame laws and regulations, it should be pointed out that hunting, fishing, trapping, and other means of take are currently not permitted within the boundaries of the Site except under the terms of scientific collection permits. Exclusion of the public from the Site has been required due to safety and security constraints, therefore, public hunting, fishing, and trapping have been prohibited. It is possible, however, that future land use decisions will allow limited harvest of game and fish resources from the Site. Any future planning for public Site use should consider the wildlife management and protection laws that affect the Site.

All managed and protected species that have been recorded at the Site are included in this discussion, regardless of how common they may be at the Site. The inclusive discussion is intended to provide as much information as possible on potential wildlife concerns to ensure that project planners are aware of all potential conflicts.

### **Birds (Game and Nongame)**

All but three of the 175 bird species that have been recorded at the Site are protected under Colorado laws as well as federal laws. Although some protected bird species are game birds, the majority of the species are protected against hunting, killing, collection, harassment, and destruction of nests and eggs. Bird nests may not be removed from any location without a specific permit. Game species may be hunted or killed only in accordance with game regulations, and only during open seasons. Birds protected under the Migratory Bird Treaty Act include all species defined as "migratory" by the Act. Game birds including sandhill cranes, common crows, some shorebirds, and most geese and ducks receive protection under the Act, but also may be hunted. State regulations and the Migratory Bird Treaty Act set seasons and bag limits for game birds.

Birds occur in all available habitats at the Site. Habitat descriptions may be found in the information sources listed below, and will not be explained in detail here. The greatest numbers of protected nongame species are found in the tall upland shrubland habitat (the greatest acreage of this is in Rock Creek), with xeric mixed grasslands (an extensive plant community on

the western pediment of the Site) a close second in bird species numbers. Mesic grasslands, including reclaimed areas (hillside grassland habitats) and the riparian (creek-bottom) channels with patchwork of deciduous woodland and bottomland shrubland habitats have a large number of bird species as well. Only the extremely disturbed areas and areas occupied by the industrial buildings have lower numbers of birds.

#### Birds of Particular Ecological Significance

Several groups of birds are considered ecologically significant because they are stress-sensitive (sensitive species), or because they demonstrate elevated responses to environmental damages (indicator species). Sensitive and indicator species are often declining in numbers throughout their range because of environmental damage, loss of habitat, competition with species introduced from foreign countries, or because they are at high levels in the food chain where contamination can bioaccumulate. Bioaccumulation is the process by which harmful substances become more concentrated each time they are consumed by a higher level of the food chain (e.g., several grasshoppers eat contaminated grass; several mice eat 4 grasshoppers each, and each gets 4-times the contamination each grasshopper ate; a red-tailed hawk eats 3 of those mice and consumes 12-times the initial contamination level). These sensitive and indicator bird species groups at the Site include raptors (birds-of-prey), waterfowl, and shorebirds which all occupy higher-level positions on the food chain. Another group, neo-tropical migrants are of general concern due to their globally declining numbers. Neo-tropical migrants are Western Hemisphere birds that breed north of the United States/Mexico border, and winter south of the border. Due to loss of habitat and other human-induced stress factors, these species are declining at a rate that has concerned biologists world-wide.

The most common raptors at the Site year-round are red-tailed hawks, American kestrels, great horned owls, and northern harriers. In summer, the most common additional species are Swainson's hawks, golden eagles, and turkey vultures. Raptor species protected under the Endangered Species Act include the bald eagle and peregrine falcon which forage on the Site. Raptors that are federal candidate species, and may be listed in the future, include the ferruginous hawk and burrowing owl. Among the 45 species of waterfowl and shorebirds at the Site, mallards, Canada geese, and great blue herons are the most common. Several waterfowl and shorebirds breed at the Site. A total of 95 neo-tropical migrant species have been recorded at the Site, several of which have been confirmed as breeding in a variety of habitats. One species from this group, the loggerhead shrike, is a federal candidate species that may be listed in the future.

#### **Game Birds**

Game birds at the Site include species that are protected under the Migratory Bird Treaty Act, as well as species that are managed by the State of Colorado. Band-tailed pigeons, mourning doves, soras, sandhill cranes, common snipe, common crows, ducks and geese are protected under the Migratory Bird Treaty Act. These species are subject to both state and federal regulations regarding hunting seasons and bag limits. Ring-necked pheasant and wild turkeys are protected only by state game laws. European starlings and house sparrows, both introduced Eurasian species are listed by Colorado as game birds with no closed season. These two species, and the rock dove (also an introduced Eurasian species) are specifically exempted from any protection by the Migratory Bird Treaty Act.

#### **Protected Mammals**

Mammal species at the Site that are protected from hunting and collection under the Colorado

Nongame, Threatened, and Endangered Species Conservation Act include all bats, porcupines, gray foxes, mink, long-tailed weasels, Preble's meadow jumping mice, olive-backed pocket mice, and silky pocket mice. Most of these species are nocturnal and secretive, and are seldom observed. Numbers of these species are not well known at the Site. These species may not be taken or killed except with an applicable state collection permit due to declining numbers. Reasons for the decline of these species are varied, but include loss of habitat, competition from feral domestic species, loss of food sources, and illegal or excessive take by man. Presence of the Preble's meadow jumping mouse at the Site is of significance because it is a federal candidate for listing under the Endangered Species Act. See the summary document titled "Status of Threatened and Endangered Species at Rocky Flats Environmental Technology Site" for greater detail on the Endangered Species Act.

Porcupines prefer tall upland shrubland habitat and the scattered ponderosa pines on the Site. Long-tailed weasels are recorded infrequently, usually around heavy shrub cover, or along creeks. Gray fox and mink have been observed in areas that provide thick cover. Bats at the Site are seldom recorded since they are difficult to trap and must be observed closely to confirm species identification. Fortuitous observations have confirmed the presence of three species at the Site. Preble's meadow jumping mice live in the riparian areas and around ponds. This species is seldom found far from tall vegetation in wet areas. For more information on this species, refer to the document titled "Status of the Preble's Meadow Jumping Mouse at Rocky Flats Environmental Technology Site." The pocket mice are grassland species, with a preference toward the xeric tallgrass prairie habitat (a rare plant community at the Site).

### **Furbearers**

The Site's furbearing species, subject to State management under Colorado hunting and trapping regulations, include coyotes, red foxes, raccoons, badgers, striped skunks, beavers, muskrats, and bobcats. Furbearers, as a group are nocturnal, and seldom exhibit heavy population densities. Home ranges for these species are often large, and some of the listed species favor areas at the Site with heavy cover. These habits make members of this group difficult to observe, and general observation techniques cannot produce accurate population estimates.

Species classified by Colorado as furbearers cannot be taken or killed outside of open seasons except to protect property from damage. The more common of these species (coyotes and raccoons) are closely monitored at the Site because predators, which occupy the top of the food chain, are indicator species of environmental stress from contamination or other sources.

The most visible furbearer at the Site is the coyote, with the next most frequently observed species being the raccoon. Both species are common in most habitats, with coyotes favoring grasslands, and raccoons preferring areas around ponds and creeks. Muskrats have been recorded in ponds in the Woman Creek, Walnut Creek, and Rock Creek drainages. They are also present in the South Interceptor Ditch (SID). Physical signs continue to confirm the occasional presence of striped skunks around water and badgers in grasslands, though neither species is abundant at the Site. Bobcats, and red fox are seldom seen, but have been recorded at the Site. Beavers have not been observed since 1994.

### **Game Mammals**

Game mammals at the Site that are managed under Colorado hunting regulations include mule deer, white-tailed deer, elk, mountain lions, cottontail rabbits, jackrabbits, fox squirrels, and black-tailed prairie dogs. These species cannot be taken or killed outside of open seasons, and

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are currently protected from hunting at the Site because of restricted public access. Except the mountain lion, these game species are important both as prey species for raptors and mammalian predators.

Big game mammals are some of the most visible species at the Site. The dominant big game species are mule deer. Elk and white-tailed deer visit the Site on a casual basis. South-facing mesic hillsides are used extensively by deer as feeding areas during the late fall, winter, and spring. Shrublands, particularly tall upland shrubland, are critical areas for mule deer fawning in spring and wind-break sites during the winter months. Tall upland shrubland and bottomland shrubland habitats are heavily used for shade cover during the hot season. Xeric mixed grassland, which is found on the flat uplands is most important to the deer during the breeding season, second only to mesic mixed grasslands of the hillsides. Mountain lions are uncommon visitors to the Site, but are reported in various habitats every year. Visual observations of mountain lions are unusual throughout their entire range, and home ranges of this species cover many square miles (i.e., the entire Site may be included in the home range to only one mountain lion). The mountain lion population at the Site is, therefore, unknown.

Small game mammals include two species of cottontail rabbits and two species of jackrabbits, black-tailed prairie dogs, and fox squirrels. The rabbits inhabit disturbed areas, scrap storage areas, rip-rap areas, and other areas affording cover. Fox squirrels are usually found in shrublands and woodlands, although they have been recorded in the developed areas of the Site as well. Black-tailed prairie dog populations were destroyed by plague in recent years, and had not recovered at the Site by the end of 1995. This species lives in grasslands where soils afford good burrowing opportunities.

#### **Reptiles and Amphibians (Herptiles)**

Prairie rattlesnakes may be hunted and killed only during open season as regulated by Colorado game laws. Prairie rattlesnakes are most commonly observed in riparian areas (creek bottoms) and around ponds where small mammal populations are highest. This species is also common in the grasslands and shrublands. All other herptiles found at the Site are protected as nongame species under the Colorado Nongame, Threatened, and Endangered Species Conservation Act, and may not be killed or collected without proper permits. One xeric grassland species at the Site, the eastern short horned lizard, is a candidate for federal listing, and could come under the protection of the Endangered Species Act in the future.

#### **Regulatory Issues**

The **Colorado Division of Wildlife** administers Colorado game laws and regulations, and enforces the Colorado Nongame, Threatened, and Endangered Species Act, which protects State listed species in addition to all federally listed species. Penalties for violations of other State wildlife protection laws can include fines for minor violations, compensation for damages, or fines up to tens of thousands of dollars for severe felony violations.

The **U. S. Fish and Wildlife Service** administers the Endangered Species Act of 1973. The regulations within 50 CFR 14, 17, and 23 protect fish, wildlife, and plants listed as endangered and threatened from injury, harassment, and death (take). Species and their habitats are protected. The U. S. Fish and Wildlife Service also enforces the **Fish and Wildlife Coordination Act** of 1958, which requires consultation whenever the waters of any stream or other water body are altered by a Federal agency. Penalties for violation of the Endangered Species Act are

severe, and include imprisonment and fines of up to **\$100,000 per person per act of violation**. Penalties for violation of the Fish and Wildlife Coordination Act include up to a year of imprisonment and **\$500 in fines per violation**. These penalties apply to **individuals** as well as **companies**.

The U. S. Fish and Wildlife Service administers the Migratory Bird Treaty Act which is based on treaties with Canada, Mexico, Japan, and Russia. Migratory birds are protected under the regulations within 50 CFR 10, 20, and 21. Without a permit it is unlawful to pursue, hunt, capture, kill, possess, sell, barter, purchase, or ship any migratory birds or their parts, eggs, nestlings, and nests. Penalties for violations are severe, and can include imprisonment and fines up to **\$100,000 per individual** and **\$500,000 per company** for each violation (e.g., if an individual destroys a swallow nest with three eggs in it, the fine can be up to \$400,000; for a company the additional fine for the same offense can be up to \$2,000,000 ). Likely violations at the Site include destruction of bird nests (even unoccupied nests are protected), or electrocution of birds, especially raptors. The death of a bird by electrocution is a prosecutable offense even though no individual plays an active role in the mortality.

These laws do not necessarily prohibit activities that could affect habitat of threatened and endangered species or migratory birds, but do require consultation with the U. S. Fish and Wildlife Service prior to such activities. Actions that would impact state protected species require consultation with the Colorado Division of Wildlife to negotiate allowable actions before the start of a project. If the ecological consequences of a planned activity are too severe, the Endangered Species Act may be prohibit the activity.

### **ASAP Issues**

#### **Regulatory**

- The areas to be affected by ASAP include wetlands, riparian habitats, ponds, and other habitats that harbor species protected under state and federal laws. Off-site impacts may also occur. Proposed actions may require consultation with the U. S. Fish and Wildlife Service, and may also require negotiations with the Colorado Division of Wildlife.

#### **Natural Resource Damage Assessment Issues**

- Impacts to natural resources such as state or federally protected species may result in a Natural Resource Damage claim against DOE. The rarity of some species could cause damage assessments to be correspondingly greater.
- DOE is a Natural Resource Trustee with responsibility for acting in the public interest regarding wildlife, plants, and their habitats.

#### **Future Land Use Compatibility**

- DOE may be required, as a result of consultation, to set land aside as a conservation area to protect at-risk species habitat. This could preclude other future land uses.
- Industrial land uses would need to comply with any mitigation or conservation agreements developed between DOE and the U. S. Fish and Wildlife Service and the Colorado Division of Wildlife.

#### **Potential Obstructions**

- Listing of any protected species currently found on the Site could unexpectedly delay the project until consultation with the U. S. Fish and Wildlife Service has been completed.
- After consultation with the U. S. Fish and Wildlife Service, and negotiations with the Colorado Division of Wildlife, a conservation agreement may require some revision to the project plan.

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### **Time Critical Issues**

- Any actions that may affect the waters of the Site will require consultation with the U. S. Fish and Wildlife Service under the Endangered Species Act. Site ecologists should be involved in any project in the early planning stages to allow early identification of potential delays pertaining to the Endangered Species Act.
- During consultation, which may include development of a Biological Assessment, there must be no irreversible or irretrievable commitment of resources by DOE.
- Depending on the findings of the Biological Assessment and the response from the U. S. Fish and Wildlife Service (Biological Opinion), the project may be delayed up to 7 months.
- If bird breeding habitat will be affected by an activity, it should be planned so it occurs during the fall or winter when the potential for impacting nesting birds is nil. The U. S. Fish and Wildlife Service can otherwise prohibit such activities until the breeding season has concluded.

### **Contamination**

- No contamination can be allowed to enter critical habitat or otherwise cause injury or death (take) to threatened or endangered species.
- Any project that might affect surface water or groundwater, either by depletion or by contamination, must be evaluated for its potential to impact threatened or endangered species.
- Any project that may cause contaminated soils, particularly mud, to become available for birds building nests will need to consider techniques to exclude birds from the contamination.
- If activities could affect potential food sources of protected species exclusion techniques may be required to prevent those species from consuming contaminated food items.

### **Other Project-Specific Issues**

In addition to the ASAP-specific issues listed above, other construction, cleanup, waste disposal, and restoration projects should consider the following compliance issues.

All Rocky Flats activities must be evaluated by a qualified ecologist for potential to impact threatened or endangered species or their habitat prior to the start of work. At a minimum, any outdoor work area must be surveyed for protected species in accordance with the Site procedures "Identification and Protection of Threatened, Endangered, and Special-Concern Species" (1-D06-EPR-END.03) and "Migratory Bird Evaluation and Protection" (1-G98-EPR-END.04).

If a protected species is found to be present at a work site, work may not be able to continue until consultation with the U. S. Fish and Wildlife Service has been completed. Ignorance of species presence, or of the law, is not considered to be a legally defensible excuse for violation of the Endangered Species Act, Migratory Bird Treaty Act, or Colorado laws. Due to the severe penalties for violation of the federal laws (see status reports on threatened and endangered species and migratory birds for additional information), early identification of potential compliance problems is recommended.

### **Monitoring Recommendations**

All Rocky Flats work sites must be evaluated by a qualified ecologist for potential to impact protected species or their habitats prior to the start of work at a planned site. Worksite-specific

surveys must be performed in accordance with Rocky Flats' wildlife protection procedures (1-D06-EPR-END.03 and 1-G98-EPR-END.04). Special monitoring before, during, and after a project may be required by the Colorado Division of Wildlife or the U. S. Fish and Wildlife Service where work will occur in critical habitat for state protected species.

### **Subject Matter Contacts**

DOE: John Stover, Kent Brakken  
KH: Larry Woods  
RMRS: Marcia Murdock

### **Regulators and Stakeholders with Significant Managed and Protected Species Interests**

- U. S. Fish and Wildlife Service (Resource management, enforce Endangered Species Act)
- Colorado Division of Wildlife (Resource management, Site Natural Resource Trustee, enforce State wildlife protection acts and Endangered Species Act)
- Biodiversity Legal Foundation (Special interest in at-risk species, has petitioned U. S. Fish and Wildlife Service to list several species)
- Colorado Natural Heritage Program/Nature Conservancy (Special interest in at-risk species and habitats)
- Jefferson County Nature Association (Special interest in at-risk species and habitats)
- Future Site Use Working Group (Special interest in Rocky Flats resource management)

### **Information Sources**

Status of Threatened and Endangered Species at Rocky Flats Environmental Technology Site. February 1996

Status of Migratory Birds at Rocky Flats Environmental Technology Site. February 1996

Status of the Preble's Meadow Jumping Mouse at Rocky Flats Environmental Technology Site. February 1996.

1994 Annual Wildlife Survey Report, Natural Resources Protection and Compliance Program. April 24, 1995.

Rocky Flats Environmental Technology Site, Ecological Monitoring Program 1995 Annual Report. May 31, 1995

Resource Protection Program Annual Wildlife Survey Report. April 29, 1994

Ecological Monitoring Program Annual Report. January 21, 1994.

Baseline-Biological Characterization of the Terrestrial and Aquatic Habitats at Rocky Flats Plant. September 1992.

Report of Findings Ute Ladies'-Tresses and Colorado Butterfly Weed Surveys. September 13, 1994.

Report of Findings Ute Ladies'-Tresses and Colorado Butterfly Weed Surveys. September 24, 1993.

February 28, 1996

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