

# Reintroduction of Black-Tailed Prairie Dogs

**EA#: AZ-420-2008-014**

**BLM Tucson Field Office  
Las Cienegas NCA**

**April 1, 2009**

**EA#: AZ-420-2008-014**

**Project Name:** Reintroduction of Black-tailed Prairie Dogs

**Preparer(s):** Karen Simms, Ecosystem Planner, Las Cienegas NCA

**Legal Description and Map Name:** Las Cienegas National Conservation Area is located in Pima and Santa Cruz County, Arizona and is approximately 35 miles southeast of Tucson. The project location is **T19S R17E Sect 9, 14, 16, 17, & 23 and T18S R17E Sect 35 on the Spring Water Canyon & Empire Ranch 7.5" quads.**

## I. Introduction

**Background:** The Approved Las Cienegas Resource Management Plan and Record of Decision (RMP/ROD) completed in July 2003 prescribes the reintroduction of several fish and wildlife species, including black-tailed prairie dog, within Las Cienegas National Conservation Area (LCNCA) and Sonoita Valley Acquisition Planning District (SVAPD) (Decision WF18).

The black-tailed prairie dog (*Cynomys ludovicianus*) formerly occurred in grasslands of southeastern Arizona. Population declines began in the late 1800s and continued into the mid-1900s, leading to eventual extirpation of the species from Arizona sometime between 1930 and 1960. Extirpation of this species was largely caused by an extensive poisoning campaign.

In 2008, after completing investigations to determine the feasibility of reestablishing the black-tailed prairie dog within its former range in Arizona, the Arizona Game and Fish Department (AGFD) developed the *Proposal to Reestablish the Black-tailed Prairie Dog to southern Arizona* (Underwood and Van Pelt 2008) through the AGFD's 12-step reestablishment process (Johnson and Glinski 1987). The purpose of the proposal is to reestablish self-sustaining populations of black-tailed prairie dogs at historical sites in Arizona and contribute to the range-wide conservation effort for black-tailed prairie dogs by establishing a free-ranging population in southern Arizona. Under this proposal, prairie dogs are to be released within their historical range at sites on federal and state lands with a high potential to succeed; LCNCA is identified as the preferred initial reintroduction site.

In October 2008, AGFD released 74 black-tailed prairie dogs onto a 10-acre site on Arizona State Trust Land adjacent to Las Cienegas NCA. The prairie dogs were captured on Turner's Ladder Ranch in New Mexico during the previous two weeks. Volunteers from Sky Island Alliance, Animal Defense League, and the Sierra Club assisted with site preparation which included mesquite removal, mowing, and installation of artificial burrows. The Prairie Dogs were released in small groups of 2-4 into small holding cages which were placed over artificial burrows. The Prairie dogs were fed and monitored by AGFD personnel daily for two weeks by which time they had burrowed out of their holding cages and had begun construction of their own burrow systems. During the daily monitoring period, daily counts of prairie dogs ranged from 30 to 41 and maximum numbers on the last day of monitoring matched those during the first week indicating the population was holding steady. No predation or mortality was observed during this period. The prairie dogs had dug at least 36 individual burrows/holes which were clustered in several groups. The farthest new burrow from the original artificial burrows was approximately 258 feet away and six prairie dogs were observed using it.

The AGFD lists the black-tailed prairie dog as Wildlife of Special Concern under the *Threatened Native Wildlife in Arizona* (1988) and as a Species of Greatest Conservation Need (Tier 1A) under the states' *Comprehensive Wildlife Conservation Strategy* (AGFD 2006). These documents provide policy guidance to both state and federal agencies and the public on AGFD priorities. It does not provide specific legal or regulatory protection for listed species. However, the general provisions of Arizona Revised Statutes, Title 17 protect all native wildlife, including federally listed species. The AGFD classifies all prairie dog species as nongame mammals. Recreational shooters are required to obtain a hunting license to take prairie dogs. However, there is no open season for black-tailed prairie dogs.

## II. Purpose and Need for the Proposed Action

The black-tailed prairie dog was historically the most abundant and widely distributed of the prairie dog species (Whicker and Detling 1988, Hoogland 1996). Human-related factors have greatly reduced black-tailed prairie dog numbers range-wide over the last 150 years (Miller et al. 1990, Hoogland 1996). This precipitous decline, as well as fragmentation and isolation of remaining populations (Miller et al. 1994), has created concern for the long-term viability of the species.

The proposed action partially implements a decision made in the Las Cienegas RMP/ROD to restore extirpated wildlife species to the ecosystem. The proposed reintroduction on LCNCA will contribute toward range-wide conservation efforts as well as current efforts by the AGFD to reestablish black-tailed prairie dogs to southeastern Arizona grasslands.

Reestablishment is an objective of the Interstate Black-tailed Prairie Dog Conservation Team, the Arizona Black-tailed Prairie Dog Working Group, and the BLM, to preclude the need for protection under the Endangered Species Act. Reestablishment will aid the AGFD in meeting the goals outlined in the Comprehensive Wildlife Conservation Strategy (AGFD 2006).

Prairie dogs are described as a keystone species for grasslands. The reestablishment of prairie dogs to the grasslands of southern Arizona will help restore a critical grassland maintenance function to this ecosystem. A wide variety of priority wildlife species (e.g. burrowing owls, golden eagles, and pronghorn) will likely benefit from grassland restoration.

**Conformance with Land Use Plan:** The proposed action is in conformance with the Las Cienegas RMP and EIS. The Approved Las Cienegas RMP/ROD was signed in July 2003. This proposed action has been reviewed to determine if it conforms with the land use plan terms and conditions as required by 43 CFR 1610.5, BLM MS 1617.3.

The proposed action is in conformance with the Las Cienegas RMP because it is specifically provided for in the following decisions:

Excerpt from Approved Las Cienegas RMP/ROD July 2003 Pages 12-13:

*Manage suitable public land habitats for the recovery or reestablishment of native populations in collaboration with federal and state agencies, user groups, and other interested parties. Provide for the reintroduction of Gila topminnow into suitable habitats in accordance with the existing BLM-AGFD Memorandum of Understanding. In addition, provide for the reintroduction, or supplementation of the following endangered, threatened, candidate and priority species within suitable habitats in accordance with existing regulations, policies and agreements (WF05):*

1. *Gila chub*
2. *Desert pupfish*
3. *Southwestern willow flycatcher*
4. *Aplomado falcon*
5. *Chiricahua leopard frog*
6. *Lowland leopard frog*
7. ***Black-tailed prairie dog***
8. *Beaver*
9. *Pronghorn*
10. *Gould's turkey*

AND

Excerpt from Approved Las Cienegas RMP/ROD July 2003 Pages 35-36:

*Reestablish, extend the distribution within historic ranges of, or supplement populations of the following wildlife species in the Sonoita Valley, where determined to have suitable habitat and be compatible with other management activities: (WF18)*

*Aplomado falcon (Falco femoralis)*  
*Gould's turkey (Meleagris gallopavo mexicana)*  
*Gila topminnow (Poeciliopsis occidentalis)*  
*Desert pupfish (Cyprinodon macularius)*  
*Beaver (Castor canadensis)*  
*Gila chub (Gila intermedia)*  
*Pronghorn antelope (Antilocapra americana)*  
*Lowland leopard frog (Rana yavapaiensis)*  
*Chiricahua leopard frog (Rana chiricahuensis)*  
***Black-tailed prairie dog (Cynomys ludovicianus)***

*(Other species may be considered as new information or management needs become known.)*

*Accomplish this action through the following steps:*

- a. Determine the population status and resources available (e.g., habitat quality, water availability) to wildlife species proposed for reestablishing or supplementing. (AA07)*
- b. When habitat conditions have been determined to be suitable for the survival of any of the above species, coordinate the suitable action (reestablishing or supplementing) by established procedures with the suitable combination of agencies and land owners: AGFD, USFWS, BLM, ASLD, and affected private landowners. (AA08)*

In addition, the proposed reintroduction sites are within the project area analyzed for Prescribed Fire and Vegetation Treatments in EA-AZ420-2006-19. Any vegetation treatment to prepare the sites for the reintroduction will conform to the proposed action and associated mitigation in this document.

#### **Relationship to Statutes, Regulations, or Other Plans:**

This project complies with management guidelines for this area included in H.R. 2941 – An Act of US Congress to establish Las Cienegas National Conservation Area 10/5/2000

This project is also consistent with and advances the objectives of the *Black-tailed Prairie Dog Conservation Assessment and Strategy* (Van Pelt 1999), and the *Draft Interagency Management Plan for Black-tailed prairie dogs in Arizona* (Van Pelt et al. 2001).

### **III. Scoping and Issues**

The AGFD held a series of eight public meetings in southeastern Arizona during October 2003 during development of their proposal to reintroduce black-tailed prairie dogs to Arizona. Over 175 people attended the meetings, and AGFD collected approximately 200 written comments on the project concept of re-establishing black-tailed prairie dogs in Arizona. In addition to the 8 public meetings, AGFD biologists gave presentations on the 12-step process at 7 Natural Resources Conservation District (NRCD) board meetings, Fort Huachuca Military Reservation, and the Southeastern Arizona Cattlemen's Association's biannual meeting. The dates and locations of these meetings and the comments received are summarized in Appendix A.

AGFD Public comment was again solicited in 2008 after completion of the draft proposal for reestablishment. Associated meetings included a presentation on 2/2/08 to the Sonoita Valley Planning Partners and a public meeting on 2/21/08 in Sonoita which was attended by approximately 20 people.

BLM reviewed the public scoping comments received from AGFD and scoped the project with our interdisciplinary NEPA team. The following resources were identified as potential issues for analysis in this Environmental Assessment because of potential positive or negative direct, indirect, or cumulative impacts from the proposed action or alternative: Areas of Critical Environmental Concern (ACECs) Threatened and Endangered Species, Wetlands/Riparian zones, Wild and Scenic Rivers, Cultural Resources, Invasive Species/Noxious Weeds, Fish and Wildlife, Livestock Grazing, Recreation, Soils, Vegetation, and Visual Resources.

## IV. Proposed Action and Alternatives

### Alternative A – Reintroduction of Black-Tailed Prairie Dogs on LCNCA (Proposed Action)

#### PROPOSED RELEASE SITE

Las Cienegas National Conservation Area (LCNCA) has been selected by the Arizona Game and Fish Department (AGFD) as the preferred site for black-tailed prairie dog reestablishment in Arizona. In addition LCNCA was identified as one of four focal areas by the Arizona Black-tailed Prairie Dog Working Group for a reestablishment effort. LCNCA contains approximately 15,421 acres of potential habitat for Black-tailed Prairie Dogs (Underwood and Van Pelt 2008). BLM's objective is to provide up to 1000 acres of reintroduction habitat for black-tailed prairie dogs on Las Cienegas NCA.

Prairie dogs generally prefer deep well-drained soils of sandy-loam to loamy-clay texture and low vegetation (Hoogland 2005). The grasslands of the Las Cienegas site are well suited for prairie dog release because several of the ecological sites have the appropriate soil and vegetative components (Hoffmeister 1986, Van Pelt et al. 2001, Hoogland 2005). Grass, forb, and shrub cover percentages are all similar to those found on occupied sites in Mexico (Koprowski and Coates 2004). These vegetative characteristics are also similar to those in other areas where successful reestablishment efforts have occurred (Hoogland 2005). Recent visits by AGFD personnel to key sites have confirmed that prairie dog habitat still exists in these areas, and that potential predators or competitors are not in an abundance that would lessen the likelihood of success in translocation. LCNCA is also within the historical range of the species, and the potential for expansion into other formerly occupied sites does exist.

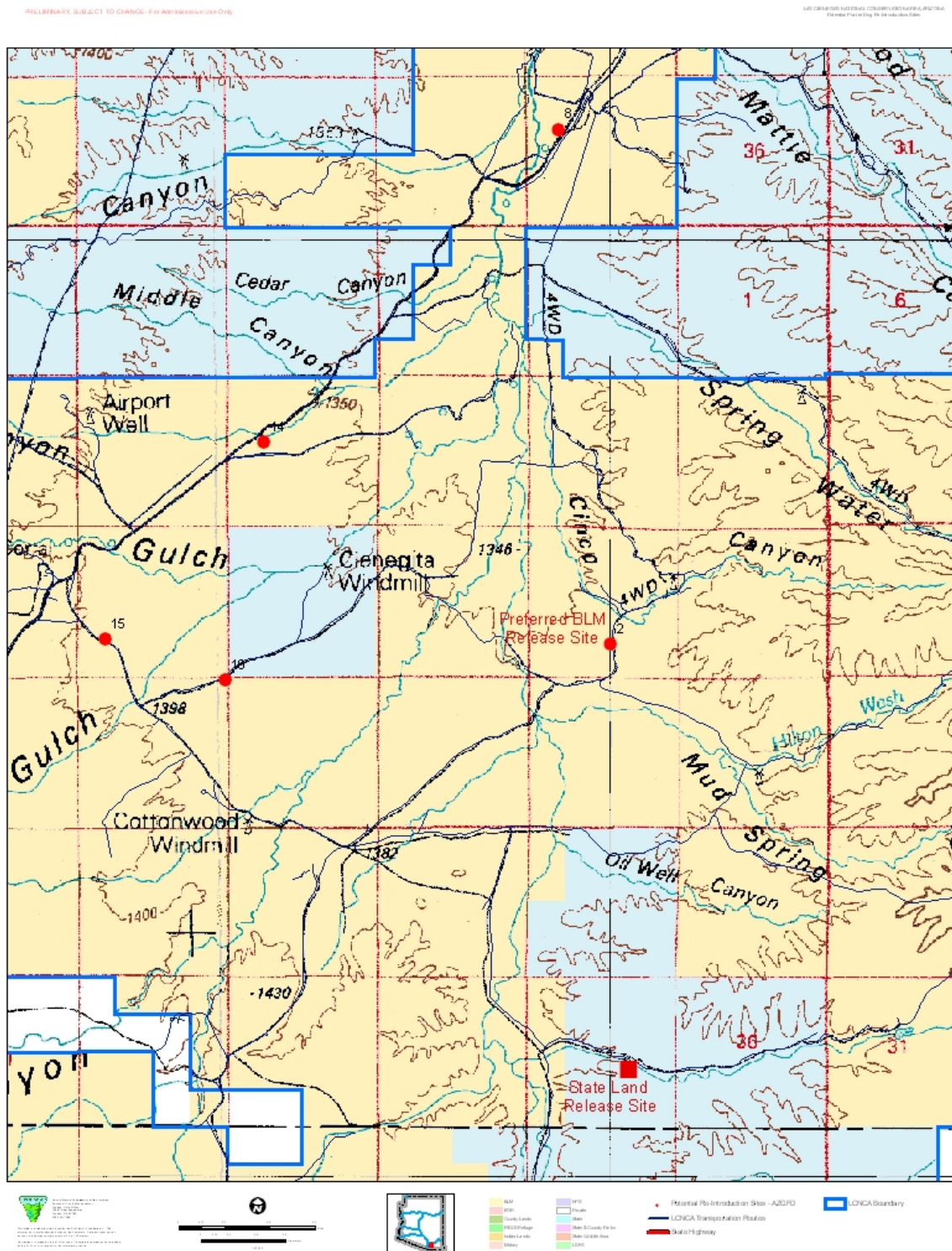
Five potential sites in LCNCA were selected for review using several selection parameters including location, ecological site, existing vegetation communities, distance from private land, and level of conflict with other intensive use areas (Figure 1). The five sites are evaluated in this environmental assessment and have been cleared for archeological resources and threatened and endangered species. Three of the potential reintroduction sites are on sandy loam upland ecological sites, one is in a sandy bottom-subirrigated ecological site (former sacaton site converted to agricultural field), and one is on a loamy upland ecological site. All five sites are more than two miles from private lands. Two sites are in areas recently cleared of mesquite as part of BLM's ongoing grassland restoration program, and one site is scheduled for mesquite treatment this winter. One site was selected as the preferred initial reintroduction site on BLM based on its location, resource values, and lack of conflicts with intensive use areas (Figure 2). This initial reintroduction site on LCNCA and the initial reintroduction site on State Trust Lands will serve as experimental locations from which AGFD can evaluate and modify the methodology used to reintroduce the black-tailed prairie dog in Arizona. Once the black-tailed prairie dog has been successfully established at the initial sites, AGFD will initiate reestablishment efforts at up to 5 other sites throughout southeastern Arizona, which may include some of the additional sites on LCNCA analyzed in this environmental assessment. These additional sites may also be located outside of the LCNCA, but all additional sites will follow the same public process and criteria for selection as the initial locations.

#### SOURCE POPULATIONS

AGFD will collect black-tailed prairie dogs to be released from sites as ecologically similar to the release sites in Arizona as possible. This range includes central and southern New Mexico, southeastern Arizona, southwestern Texas, and Chihuahua and Sonora, Mexico (Oakes 2000). Prairie dogs from these populations are likely most similar genetically and ecologically to those that were extirpated from Arizona, based on their proximity to former Arizona populations. Whenever possible, collection of individuals for release will be sufficiently large so genetic bottlenecks will be avoided and genetic variability will be maximized (Hedrick and Miller 1992). Additionally, translocation of intact family groups (coteries) may increase the success of prairie dog translocations (Hoogland 2005, Shier 2006). Therefore, AGFD will make an effort to translocate complete coteries to increase the chance for success of the reestablishment. Finally, AGFD will select individuals for translocation from source populations that are large enough so that removal of individuals will not affect the long-term persistence of the source colony.



**Figure 2: Map of Potential Locations for Black-tailed Prairie Dog Reintroduction on LCNCA showing preferred site on BLM land and existing reintroduction site on State Land**



#### SITE PREPARATION AND RELEASE

Release sites will be prepared in advance of animal capture and release. Site preparation may include treatment to reduce the height of tall vegetation and the installation of acclimation cages with man-made burrows on up to 10 acres at the release site. Removal of mesquite and other shrubs and mowing of grasses will occur within the preferred release site and will conform to the proposed action and associated mitigation in the Las Cienegas NCA vegetation treatment EA-AZ420-2006-19.

Studies show that recipient sites are most suitable when all vegetation is shorter than 6 inches (Hoogland 2005) and that vegetation should be reduced to no greater than 12 inches for up to 50 meters surrounding the burrow site (Hoogland 2005). This reduction in vegetation may be achieved through mowing, grazing, or prescribed fire (Truett 2001).

#### ACCLIMATION CAGES AND MAN-MADE BURROWS

To prevent prairie dogs from quickly dispersing out of an area, acclimation cages in combination with man-made burrows are essential (Hoogland 2005). Each acclimation cage consists of an underground nest chamber and an above ground retention basket connected by flexible, corrugated plastic tubing with a diameter of 4 inches (see Figure 3). This allows movement of prairie dogs between a nest-chamber and retention basket, but deters escape during the period of acclimation.

Acclimation-cages will be deployed 10-20 meters apart in a grid fashion (Hoogland 2005). Four to ten individuals will be placed in each acclimation pen and dry food and water will be provided in the retention baskets. After introducing the prairie dogs, they will be allowed to dig themselves out of the acclimation cages or, after two weeks, the retention-baskets will be removed. If necessary, the acclimation cages and the associated man-made materials will be removed.

#### CAPTURE AND RELEASE

Wire mesh livetraps suitable for prairie dogs will be used to trap individuals on the selected donor sites. Livetraps will be pre-baited for several days using oats as bait. Immediately after capture, all prairie dogs will be dusted for fleas using Delta Dust to kill fleas which could transmit plague (Hoogland 2005). All prairie dogs that die during, after capture, and for up to 2 weeks post-release will be necropsied. Testing for plague will be the primary objective, but documenting other causes of mortality (e.g. tularemia) is also valuable.

Approximately 60-100 prairie dogs will be released at the reestablishment site. This number of prairie dogs is generally believed to be required for a successful reestablishment (Truett et al. 2001, Hoogland 2005).

#### POST-RELEASE MONITORING

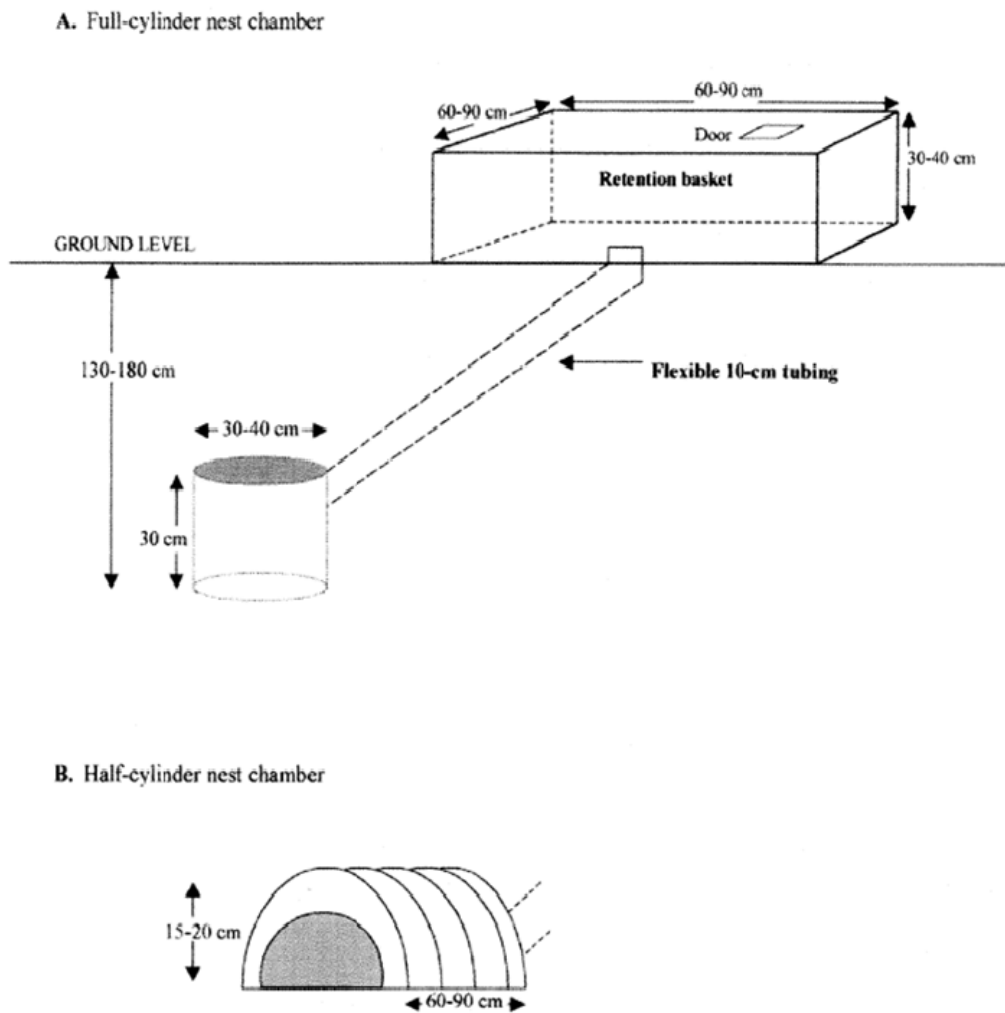
Monitoring is a critical step in the reestablishment process. Only through a carefully designed monitoring plan will AGFD be able to determine whether the attempt at reestablishment was successful and formulate future plans based on the successes and failures. Both dynamics of translocated prairie dog populations and the quality of habitat to which they were released need to be monitored. Some researchers have suggested a monitoring commitment of 6 to 10 years to gain insight into the successful reestablishment. Before any releases are made, AGFD will evaluate the site for all monitoring components so that a baseline can be established.

The necessity of a long-term monitoring plan becomes evident when considering how to define success in reestablishment. Success of a reestablishment should be evaluated on multiple temporal scales. Immediate or short-term success would be evaluated in the weeks following the release of animals. Long-term success, the establishment of a self-sustaining wild population, cannot be determined until the founding population has had time to establish and reproduce. This suggests that at a minimum, monitoring needs to take place for at least 3 years.

In the short-term, monitoring of translocated prairie dogs not only measures success, but allows for early detection and correction of problems. The primary technique used to monitor translocated prairie dogs is periodic visual censuses which can assess the survivorship of a newly established colony (Hoogland 2005). Since prairie dogs spend a large amount of time underground, and not all individuals can be counted, AGFD will use standard indexes of observability to estimate the number of prairie dogs that remain at the release site (Hoogland 2005). Post release counts of translocation sites will occur weekly during the 3 months following release (Hoogland 2005, USFWS 2006). After.



**Figure 3: Acclimation cage and man-made burrow used in prairie dog reintroduction**



**Figure 13.2** Acclimation-cage used to coerce translocated prairie dogs to remain at a recipient-site. Each acclimation-cage consists of an underground nest-chamber and an aboveground retention-basket, connected by flexible plastic tubing with a diameter of 10 cm (4 in.). Materials for the construction of full-and half-cylinder nest boxes include non-perforated plastic tubing with a diameter of 10 cm (4 in.), particle-board, and 1 cm x 1 cm (0.25 in. x 0.25 in.) hardware cloth. The retention-basket, used with both full-and half-cylinder nest-chambers, consists of 2.5 cm x 5.0 cm (1 in. x 2 in.) welded wire, and has a hinged access door in the top, and a 10 cm by 10 cm (4 in. x 4 in.) hole in the bottom for the plastic tubing. (A) The full-cylinder nest-chamber is installed with a powered auger and trencher. (B) The half-cylinder nest-chamber is installed with a backhoe. The half-cylinder nest-chamber usually takes less time to install than the full-cylinder nest-chamber, but disturbs more soil. Prairie dogs readily use both types of nest-chamber. Details for construction and installation are available from authors.

this point, the survival and population size of translocated animals generally remains fairly constant (Hoogland 2005). Monitoring during the first three months will also include a measure of the distribution, abundance, and quality of new burrows, as this provides insight into the security of released animals (Truett et al. 2001). Furthermore AGFD will be monitoring for the incidence of predators and predation, impacts due to recreation, and incidence of plague in the reestablished prairie dogs. Plague monitoring will involve visual surveys of the reestablishment site to document die-off events. If plague is detected, prairie dog colonies will be dusted for fleas within 48-72 hours when possible

After the initial three months period of intensive monitoring, long-term monitoring of the reestablishment site will occur on a monthly basis for up to three years. At the conclusion of the second phase, reestablishment sites will be monitored seasonally for an additional seven years (USFWS 2006). Monitoring will not only occur on black-tailed prairie dog population dynamics, but also on the effect of reintroduction to the grassland ecosystem. To measure grassland ecosystem response, changes in vertebrate diversity and changes in vegetative composition and structure will be monitored. This will be done using accepted habitat and species monitoring methods. Monitoring for evidence of plague in the reestablished prairie dogs will continue throughout this time period. Plague monitoring will involve visual surveys of the reestablishment site to document die-off events. If plague is detected, prairie dog colonies will be dusted for fleas within 48-72 hours when possible.

#### *POST-RELEASE ADAPTIVE MANAGEMENT*

The monitoring efforts described above will be used to make adaptive management decisions. The project will be evaluated on a yearly basis with input from AGFD, BLM, and other stakeholders so that appropriate changes can be implemented. In addition, the project will receive a more comprehensive review by all stakeholders at the end of the initial 5-year experimental phase. Potential adaptive management actions include actions related to reestablishment techniques, additional habitat manipulations, and lethal and non-lethal species management.

#### *Adaptive Management - Reestablishment Techniques*

1. Supplement the initial release sites with additional prairie dogs for up to three years. The goal of this project is to have long-term persistence of self-sustaining populations. Researchers experienced in black-tailed reintroductions have suggested that a minimum of 300 individuals is needed to achieve long-term persistence (P. Martin, per com)
2. Alter reestablishment techniques or locations (within Las Cienegas National Conservation Area). If the techniques or locations that AGFD uses in the initial efforts fail, alternative potential sites and strategies have been identified. Additional techniques could include more intensive monitoring and or exclusion of predators, additional monitoring to assess impacts of human disturbance, dispersal, and man-made burrow use.
3. Modify the site to make it more suitable for prairie dogs. This could include the removal of additional mesquite, the subsequent mowing, burning, or grazing of tall vegetation, or relocation of burrow structures.
4. In the event of relocation or the abandonment of burrow structures, if burrow structure are deemed to be hazardous or damaging to the environment, they may be removed.

#### *Adaptive Management - Species Management*

1. Remove prairie dogs from unsuitable areas. Some dispersal from the initial reestablishment site is expected. During the initial 5-year phase of the project, when prairie dogs disperse into areas which are deemed unsuitable, the AGFD will remove them from those areas. Unsuitable areas may include floodplain, private lands, and proximity to structures. These prairie dogs will be re-released in suitable areas. At the end of the 5-year initial phase, this policy will be reevaluated. If prairie dogs become established in unsuitable areas, the local Game and Fish Office should be contacted.

2. After successful reestablishment, it is anticipated that the species will be managed in a manner similar to the Gunnison's prairie dog in northern Arizona. Such management currently allows landowners and managers to control prairie dogs through both lethal and non-lethal means.
3. Evaluate impacts on grassland, recreation, and grazing. As described above, AGFD, BLM and other partners will conduct both short and long-term monitoring to assess the impacts of black-tailed prairie dog reintroduction on the grasslands. The impacts to the grassland ecology, grazing, and recreation will be evaluated with stakeholders on a yearly basis. If negative impacts are observed, potential mitigating actions will be evaluated to address them, which may include relocation of prairie dogs, alteration of management techniques, adjustments in habitat allocations, or suspension of the project.

### **Mitigation for Proposed Action**

- 1). Should any archaeological resources or vertebrate fossils be discovered during implementation of this project, all surface disturbing activities in the area of discovery shall cease and the BLM Field Office Archaeologist will be notified. The archaeologist will evaluate the discovery and provide recommendations to the Authorized Officer. Surface disturbing activities shall not resume until permission is obtained from the Authorized Officer.
- 2) Any construction vehicles used on the project will be washed off prior to use on the site to minimize risk of introduction of exotic species.

### **Alternative B (No Action)**

Under this alternative, black-tailed prairie dogs will not be reintroduced directly onto LCNCA. However, under this alternative it is possible that black-tailed prairie dogs released on Arizona State Trust Lands adjacent to LCNCA in 2008 may move onto and establish a population on LCNCA.

## **V. Affected Environment and Environmental Effects**

### **Resources or Elements which may be impacted by the proposed action or alternatives:**

#### **Areas of Critical Environmental Concern (ACEC):**

The project is located on public lands within the Empire-Cienega ACEC. The goals of the ACEC are to protect and enhance watershed, grassland, and threatened/endangered wildlife resources, emphasizing total ecosystem management.

**Impacts of Proposed Action:** The Proposed Action is in conformance with the goals of the ACEC as reintroduction of prairie dogs would enhance watershed, grassland, and wildlife resource values of the ACEC. Alternative A meets ACEC objectives 2, 5, and 7 by enhancing water quantity in the stream and enhancing grassland condition.

**Impacts of No Action:** Under Alternative B (No action), ACEC values would not be enhanced unless black-tailed prairie dogs introduced are adjacent State Trust lands move onto the ACEC.

**Cumulative impacts to ACEC:** The proposed action and a number of other actions to be implemented through Las Cienegas RMP will result in protection and enhancement of the ACEC and its unique resource values.

**Threatened and Endangered Species:**

**Table 1  
Federally Listed or Proposed Species in the Project Area**

Common Name	Scientific Name	Federal Status	Habitat and Presence on NCA	Present in Project Area? (Y/N)	Impacted by Project? (proposed action) (Y/N)
Gila topminnow	<i>(Poeciliopsis occidentalis occidentalis)</i>	FE	Pools, cienegas, backwaters, seeps, and springs. Present in Cienega Creek, Empire Gulch, and Mattie Canyon	No	Indirect Beneficial Impact
Gila chub	<i>(Gila intermedia)</i>	FE with critical habitat	Deep pools with overhanging banks/cover. Present in Cienega Creek and Mattie Canyon.	No	Indirect Beneficial Impact
Desert pupfish	<i>(Cyprinodon macularius)</i>	FE	Small, shallow pools, cienegas, backwaters, seeps, and springs. Historically present in the Santa Cruz and San Pedro river drainages. One reintroduced population is present in pond on private land near NCA.  Proposed for reintroduction.	No	No
Chiricahua leopard frog	<i>(Rana chiricahuensis)</i>	FT	Pools in stream channels and isolated pools at seeps and springs. Present recently in Cienega Creek, Empire Gulch, Mattie Canyon, and off-channel ponds. Declining numbers	No	Indirect Beneficial Impact
Bald eagle	<i>(Haliaeetus leucocephalus)</i>	FT	Large, open bodies of water for foraging; large trees or snags or cliffs for nesting. Transient in NCA/SVAPD	No	No
Northern aplomado falcon	<i>(Falco femoralis septentrionalis)</i>	FE	Open grassland habitats with scattered trees/yucca for nesting and perches. Extirpated.	No	Could improve habitat for future establishment by this species
Southwestern willow flycatcher	<i>(Empidonax traillii extimus)</i>	FE	Dense willow and cottonwood habitats along streams with perennial water. Migratory individuals and one breeding pair documented along Cienega Creek. Annual surveys have not found breeding pairs in last 3 years along Creek including project area.	No.	Indirect Beneficial Impact
Lesser long-nosed bat	<i>(Leptonycteris curasoae yerbabuena)</i>	FE	Forages on agave in upland grassland habitats. Confirmed presence in NCA/SVAPD. Foraging plants in uplands near project area.	Yes	No

Jaguar	( <i>Felis onca</i> )	FE	May use dense vegetation in river bottoms for foraging and travel corridors. Historical records from mountains next to planning area but no current records.	Unknown	No
Canelo lady tresses orchid	( <i>Spiranthes delitescens</i> )	FE	Present in drainages near planning area but not documented along Cienega Creek or tributaries.	No	No
Huachuca water umbel	( <i>Lilaeopsis schaffneriana</i> ssp. <i>recurva</i> )	FE	Early successional species requiring periodic flooding and opening of streamside habitat and sand deposition. Has been all along Cienega Creek and in Empire Gulch	No	Indirect Beneficial Impact

FE = Federally listed as endangered, FP= Proposed for federal listing, FT = Federally listed as threatened.

**Impacts of Alternative A (Proposed Action):**

The proposed black-tailed prairie dog reintroduction sites are not within habitats occupied by any listed species and do not include critical habitat designated for any listed species. However, the reintroduction sites are on Las Cienegas NCA in the upper Cienega Creek watershed, which has habitats occupied by six listed species: Gila topminnow, Gila chub, Chiricahua leopard frog, southwestern willow flycatcher, Huachuca water umbel, and lesser long-nosed bat. The proposed reintroduction sites are in semi-desert grassland habitats approximately 1-5 miles from the Cienega Creek drainage, where five of the listed species are found. Black-tailed prairie dogs do not utilize wetland or riparian habitats, so there will be no direct impacts to the listed species which occupy these habitats: Gila topminnow, Gila chub, Chiricahua leopard frog, southwestern willow flycatcher, and Huachuca water umbel. The proposed action is anticipated to have indirect beneficial impacts on these five aquatic and riparian dependent species as over the long term, reintroduction of prairie dogs should result in improved grassland conditions and improved infiltration of water into the aquifer which should increase surface water in the creek and benefit these species.

No agaves or other foraging plants for lesser long-nosed bats are present at the proposed reintroduction sites. Agaves are found on hillsides in the vicinity of the reintroduction sites, but these hillsides have shallower soils and are areas not preferred by prairie dogs.

No adverse impacts to the listed species are anticipated from the proposed action. No destruction or adverse modification of critical habitat designated for Gila chub is anticipated from the proposed action.

**Impacts of Alternative B (No Action):** There are no anticipated adverse impacts to T&E species and no anticipated destruction or adverse modification of Gila chub critical habitat from the no action alternative.

**Cumulative impacts to T&E and their habitat:** The proposed action in combination with the other actions planned in the Las Cienegas RMP should overall benefit T&E species and their habitats. However, continued development of private and State lands on the rapidly growing southeast side of Tucson as well as growth in outlying areas poses a major threat to T&E species in the Cienega watershed and surrounding areas. Of particular concern are impacts to surface waters which support the majority of federally listed species in Table 1. The ongoing Sonoran Desert Conservation Plan should help minimize some of the threats to listed species from development in Pima County.

**Cultural Resources:**

Cultural resources documented in Las Cienegas NCA and surrounding Sonoita Valley Acquisition Planning District consist mainly of prehistoric, protohistoric, and historic archaeological sites and historic structures representing four cultural groups: Archaic/Early Agricultural, Hohokam, Sobaipuri, and Anglo-American. Cultural resources that are documented at nearby sites and that may exist in the NCA/SVAPD represent four other cultural groups: Paleo-Indian/Clovis, Apache, Spanish, and Mexican.

**Impacts of Alternative A (Proposed Action):** The proposed action would not impact any known cultural sites. A Class III inventory of the project area was conducted by a Field Office archeologist and no evidence of National Register eligible cultural sites was found at the proposed release sites. Should prairie dogs expand in the future across greater areas of LCNCA, some disturbance of cultural sites could occur as a result of burrow establishment.

**Impacts of Alternative B (No Action Alternative):** Under the no action alternative, no cultural sites would be impacted.

**Cumulative impacts to cultural resources:** Increased visitation to public lands is anticipated as Tucson and surrounding areas experience rapid population growth. With increased visitation comes the probability of increased impacts to cultural properties. The proposed action may entice additional visitors to the area to see the prairie dogs resulting in an increased potential of visitor impacts to cultural sites on LCNCA.

**Wetlands/Riparian Zones:**

The proposed reintroduction sites are all within 1-5 miles of Cienega Creek. The preferred release site is approximately 1 mile northeast of the Headwaters area of Cienega Creek, where banks are stable and have heavy growths of deer grass (*Muhlenbergia regens*), black willow (*Salix gooddingii*), and cottonwood (*Populus fremontii*). Much of this reach is now characterized as a wooded swamp with an overstory of willow and cottonwood and an understory of cienega vegetation.

**Impacts of Alternative A (Proposed Action):** Alternative A supports the maintenance of proper functioning condition for this segment of Cienega Creek. Reintroduction of Prairie Dogs in upland areas is anticipated to increase infiltration of water in the watershed thereby increasing surface water in the creek.

**Impacts of Alternative B (No Action Alternative):** Under the no action alternative, no impacts to riparian zones will occur. If expansion of black-tailed prairie dogs occurs from the initial release on Arizona State Trust lands, then benefits may be similar to those for the proposed action over the long-term.

**Cumulative impacts to Wetland/Riparian Zones:** The proposed action in combination with the other actions planned in the Las Cienegas RMP should benefit wetland and riparian resources. However, continued development of private and State lands on the rapidly growing southeast side of Tucson as well as growth in outlying areas in the upper Cienega watershed pose a major threat to riparian and wetland areas in the Cienega watershed and surrounding areas. Of particular concern are impacts to surface waters which support these vegetation communities. The ongoing Sonoran Desert Conservation Plan should help minimize some of the threats to riparian and aquatic areas from development in Pima County.

**Wild and Scenic Rivers:** Two five mile segments of Cienega Creek located within Las Cienegas NCA were determined to be eligible for inclusion in the Wild and Scenic Rivers System by the BLM in 1997. The project area is within the *watershed* supporting Cienega Creek Wild and Scenic River (WSR) segments.

**Impacts of Alternative A (Proposed Action):** The proposed action should benefit the Cienega Creek Wild and Scenic River segments by supporting improvement of riparian areas as described in the impacts to Wetland/ Riparian Areas section above.

**Impacts of Alternative B (No Action Alternative):** Under the no action alternative, the Cienega Creek Wild and Scenic River segments will not be impacted. If expansion of black-tailed prairie dogs occurs from the initial release on Arizona State Trust lands, then benefits may be similar to those for the proposed action over the long-term.

**Cumulative impacts to Wild and Scenic Rivers:** The proposed action in combination with the other actions planned in the Las Cienegas RMP should benefit wild and scenic river values in the Cienega Creek WSR segments.

**Noxious Weeds:**

**Impacts of Alternative A (Proposed Action):** There are no known federally listed noxious weeds within the project area. However, there is the potential for the introduction or spread of invasive and non-native species and introduction of noxious weeds from seeds which are transported on equipment used in project activities under this Alternative. Requiring washing of all construction vehicles prior to use on the project should minimize this risk. Lehmann’s lovegrass (*Eragrostis lehmannii*), an invasive exotic grass species, is well established at numerous sites throughout LCNCA and is present at the preferred release site. No effective control methods are currently known for this species. It is unknown how black-tailed prairie dogs will interact with and influence this grass species and vice versa. It is hoped that the long-term monitoring under the proposed action will provide some indications of the interactions between these species.

**Impacts of Alternative B (No Action Alternative):** Under the no action alternative, neither an increase in potential for introduction of noxious weeds nor an increased risk of spread of invasive or non-native species is anticipated.

**Cumulative impacts to Noxious Weeds:** There is a potential for the introduction of noxious weeds and the introduction and spread of invasive or non-native species from public activities on the Sonoita Valley Acquisition Planning District and Las Cienegas NCA. Some non-native species such as Lehmann’s lovegrass are already established in the area, and there are currently no effective methods to eliminate the species. Other species which may be introduced or spread by vehicle travel or other means could be monitored for and controlled if detected thereby minimizing the cumulative impacts. The portion of the Cienega watershed surrounding the project area has already been impacted by grazing, recreation, and illegal immigration and smuggling activities, both of which can also spread non-native and invasive species.

**Fish and Wildlife Resources:**

**Table 2  
Proposed Wildlife of Special Concern in Arizona  
Occurring or Likely to Occur in the Project Area**

Common Name	Scientific Name	Habitat and Presence on NCA	Present in Project Area? (Y/N)	Impacted by Project? (proposed action) (Y/N)
Mexican garter snake	<i>Thamnophis eques</i>	Perennial stream segments and marshes along Cienega Creek and tributaries	No	Indirect Beneficial Impact
Bunch grass lizard	<i>Sceloporus scalaris</i>	Desert grassland	likely	
Lowland leopard frog	<i>Rana yavapaiensis</i>	Perennial streams, springs, and pools within lower Cienega Creek watershed	No	Indirect Beneficial Impact

Azure bluebird	<i>Sialia sialis fulva</i>	Oak woodland, mainly in winter	No	No
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Cottonwood-willow riparian areas along Cienega Creek and tributaries	No	Indirect Beneficial Impact
Ferruginous hawk	<i>Buteo regalis</i>	Occasional visitor, foraging in grassland habitats	Yes	Yes
Northern goshawk	<i>Accipiter gentilis</i>	Vagrant, usually dense coniferous forest	No	No
Swainson's hawk	<i>Buteo swainsonii</i>	Regular breeder, grassland habitats	Yes	Yes
Green kingfisher	<i>Chloroceryle americana</i>	Perennial streams, rare to regular visitor in NCA/SVAPD	No	No
Sprague's pipit	<i>Anthus spragueii</i>	Desert grassland, open valley bottoms	Yes	Yes
Baird's sparrow	<i>Ammodramus bairdii</i>	Desert grassland swales	Yes	Yes
Arizona grasshopper sparrow	<i>Ammodramus savannarum ammolegus</i>	Desert grassland swales Summer breeding population of particular concern	Yes	Yes
Western red bat	<i>Lasiurus blossevillii</i>	Cottonwood willow riparian areas along Cienega Creek and tributaries	No	Indirect Beneficial Impact
Townsend's big-eared bat	<i>Plecotus townsendii</i>	Present in drainages near planning area but not known from project area. Roosts in caves/mines, forages on insects in uplands or over water	No	No

**Impacts of Alternative A (Proposed Action):** The benefits of reestablishing black-tailed prairie dogs in Arizona could go beyond the direct effects to black-tailed prairie dogs to also encompass benefits to other grassland species. Since black-tailed prairie dogs are keystone species in grasslands, many other wildlife species would benefit from the grassland restoration brought about by reestablishment of prairie dogs. Success in reestablishment would increase the current geographic range of the prairie dog, which should make the population as a whole more robust to stochastic or localized catastrophic events. The successful reestablishment of a native prairie dog in Arizona would add to the state's natural heritage and bring back an important component currently missing from Arizona's southern grasslands.

A wide variety of wildlife present on LCNCA would benefit from some attribute of prairie dog colonies. Pronghorn antelope (*Antilocapra americana*) have been documented to preferentially forage on prairie dog colonies (Coppock et al. 1983b, Krueger 1986), taking advantage of the highly nutritional vegetation (Foster and Hygnstrom 1990). Kotliar et al. (1999) reviewed the literature on prairie dog-associated species, and found that at least nine species showed some degree of dependence on prairie dogs including the Golden Eagle, Ferruginous Hawk, Horned Lark, Deer Mouse, and N Grasshopper Mouse which are known to occur on LCNCA. Several of these species have experienced population declines concurrently with the decline in prairie dog numbers, and have been or are under consideration for federal protection (Kotliar et al. 1999). A number of species such as Swainson's hawks and Ferruginous hawks will prey on prairie dogs. In addition, species such as burrowing owls (*Athene cunicularia*) use prairie dog burrows for shelter (Wuerthner 1997, Desmond et al. 2000) and may return to LCNCA once prairie dogs are reestablished. Because the black-tailed prairie dog influences ecosystem functions through its activities in unique and significant ways, it is considered as a keystone species of the prairie grasslands (Miller et al. 1994, Kotliar et al. 1999).



Indirect positive impacts to riparian and aquatic dependent fish and wildlife are anticipated. The increased soil infiltration should increase the surface water in the creek benefiting these species.

**Impacts of Alternative B (No Action Alternative):** If the black-tailed prairie dog is not brought into Arizona, it is unlikely that it could naturally reestablish in the foreseeable future. However, black-tailed prairie dogs which have been reintroduced on State Trust lands could move onto BLM lands within Las Cienegas NCA. Known populations in Mexico are approximately 100 km distant from former Arizona localities and regions of uninhabitable arid land separate the habitable grassland regions. Currently, black-tailed prairie dog populations are considered stable in several other states and in parts of northern Mexico. This indicates that the black-tailed prairie dog is not immediately threatened with range-wide extinction. However, plague can cause sudden die-offs in black-tailed prairie dogs and the best defense against such an outbreak is widely dispersed populations of prairie dogs. Initiating reestablishment efforts and beginning to actively manage this species now may help it to persist into the future, and avoid possible federal listing actions.

**Cumulative impacts to Fish and Wildlife Resources:** The proposed action in combination with the other actions planned in the Las Cienegas RMP should benefit fish and wildlife, including sensitive species in Table 2 and their habitats. However, continued development of private and State lands on the rapidly growing southeast side of Tucson as well as growth in outlying areas poses a major threat to fish and wildlife species and their habitats particularly from fragmentation of habitats within the Cienega watershed and surrounding areas. Another concern is impacts to surface waters which support the majority of sensitive species in Table 2. The ongoing Sonoran Desert Conservation Plan should help minimize some of the threats to listed species from development in Pima County.

#### **Livestock Grazing:**

The project area is located within the boundaries of the Empire-Cienega grazing allotments.

**Impacts of Alternative A (Proposed Action):** Alternative A would not directly impact operation of either grazing allotment. AGFD considers current levels of livestock grazing to be compatible with prairie dog reintroduction (Underwood and Van Pelt 2008). The livestock operator on the Empire and Cienega allotments is supportive of the reintroduction proposal.

**Impacts of Alternative B (No Action Alternative):** Under the no action alternative, operation of the grazing allotments will not be impacted whether black-tailed prairie dogs move onto the NCA from adjacent State Trust lands or not.

**Cumulative impacts to Livestock Grazing:** Livestock grazing operations have been affected in recent years by increased recreation, illegal immigration activities, and increased environmental restrictions which result from new laws and policies such as new listings of threatened and endangered species. The proposed action and other planned actions in the Las Cienegas RMP are designed to provide for continued livestock grazing operations in environmentally suitable areas.

#### **Recreation:**

**Impacts of Alternative A (Proposed Action):** Under the Proposed Action, no additional restrictions to recreation use are expected. Reintroduction of Black-tailed Prairie dogs provides a new wildlife species on LCNCA, which will enhance wildlife viewing recreation opportunities. AGFD considers recreational activities such as hunting, camping, and hiking to be compatible at current levels and locations with reintroduction efforts (Underwood and Van Pelt 2008). However the presence of prairie dogs may present a conflict for some recreation users engaging in intensive recreation activities such as bird dog field trials or equestrian events where horses are involved who have safety concerns from burrows or potential interactions of domestic animals and prairie dogs.

**Impacts of Alternative B (No Action Alternative):** Impacts to recreation activities are not anticipated under the no-action alternative unless black-tailed prairie dogs expand from the initial reintroduction site on State Trust lands. If this occurs, then the impacts to recreation activities from the Proposed Action and No Action alternatives are likely to be similar.

**Cumulative impacts to Recreation:** None anticipated.

#### **Soils:**

**Impacts of Alternative A (Proposed Action):** The digging actions of prairie dogs enhance soil structure, water filtration, and forb growth.

**Impacts of Alternative B (No Action):** Impacts to soils are not anticipated under the no-action alternative unless black-tailed prairie dogs expand from the initial reintroduction site on State Trust lands. If this occurs, then the impacts to soils from the Proposed Action and No Action alternatives are likely to be similar.

**Cumulative impacts to Soils resource:** No cumulative impacts to soils are anticipated under these alternatives.

**Vegetation:** see also Noxious weeds and Wetland/Riparian areas analysis.

The watershed and upland vegetation objectives for Las Cienegas NCA cover the National Resources Conservation Service (NRCS) ecological sites within the Sonoita Valley (Major Land Resource Area D-41-3 Southern Arizona Semidesert Grassland, 12-16 inch precipitation zone; and D-41-1 Mexican Oak-Pine Woodland and Oak Savannah, 16-20 inch precipitation zone.

- a. Desired Plant Communities--Maintain or achieve properly functioning upland condition and a high similarity index (> 50%, by weight) to the historic climax plant community present on the site on 80% or more of the ecological sites in the Sonoita Valley by the year 2015. (WS01)
- b. Desired Ground Cover--Maintain or achieve the following ground cover on 80% or more of the ecological sites in the Sonoita Valley by the year 2015: Within Major Land Resource Areas 41-1 and 41-3, maintain or achieve ground cover in woodland communities in excess of 60% (<40% exposed soil surface), in grassland communities in excess of 70% (<30% exposed soil surface), and in shrubland communities in excess of 40% (<60% exposed soil surface). (WS02)

**Impacts of Alternative A (Proposed Action):** Prairie dogs alter grasslands by modifying vegetation structure and composition, soil structure, nitrogen concentration in plant shoots, and landscape configuration. Prairie dog foraging activities and vegetation clipping behavior helps maintain short stature grass and facilitate the detection of predators (King 1955, Hoogland 1995). Prairie dog foraging also causes a shift in plant species composition, frequently increasing diversity and the proportion of short grasses and annual forbs compared to mid-height and tall grasses (Koford 1958, Agnew et al. 1986, Whicker and Detling 1988). Grazing by prairie dogs enhances the growing conditions of certain plants, increases the standing live-to-dead biomass ratio, and increases the nitrogen concentration and nutritional value in available plant shoots (Coppock et al. 1983a, 1983b, Whicker and Detling 1988). The digging actions of prairie dogs enhance soil structure, water filtration, and forb growth.

Prairie dogs produce broader, landscape level effects as well. They create a mosaic of different patch structures within the grassland matrix, based on the distribution of colonies (Hoogland 1981, Whicker and Detling 1988). They also help maintain the grassland ecosystem by preventing the encroachment of woody vegetation. Weltzin et al. (1997) reported that historic populations of black-tailed prairie dogs might have prevented mesquite from attaining dominance in desert grasslands of the southwest. Additionally, prairie dog colonies may serve as fire breaks in grassland communities (Kotliar et al. 1999).

The impacts of prairie dog reestablishment on Las Cienegas NCA can be predicted to some extent based on the studies discussed above. However impacts will largely depend on many site specific factors such as the success of reestablishment efforts; resulting size and distribution of successful colonies; rate of expansion of occupied areas; interactions with other species including predators and competitors; drought and other climatic factors; and the prairie dogs response to the unique grassland systems present on the NCA. Because many of these factors, interactions, and responses are unknown, monitoring is included as a key element of the proposed action. The proposed action is experimental and designed to assess and adapt to the responses of the grassland system to the reestablishment effort. The risks of negative impacts are anticipated to be relatively low when applied on a scale of a few hundred acres or less, and at this scale reestablishment of prairie dogs is anticipated to be compatible with both upland vegetation and wildlife habitat objectives. If expansion of prairie dog colonies into larger and more extensive acreages results in movement away from desired condition objectives for grassland ecological sites, as determined by monitoring activities, then the proposed action provides for control activities.

BLM is beginning implementation of a vegetation treatment program on 23,000 acres on LCNCA with the goal of restoring native grasslands by reducing mesquite and shrub encroachment. Reestablishment of prairie dogs may help this restoration effort in localized areas due to the prairie dogs habit of girdling woody species which are present near their colonies.

**Impacts of Alternative B (No Action):** Impacts to vegetation are not anticipated under the no- action alternative unless black-tailed prairie dogs expand from the initial reintroduction site on State Trust lands. If this occurs, then the impacts to vegetation from the Proposed Action and No Action alternatives are likely to be similar.

**Cumulative impacts to Vegetation resource:** See cumulative impacts under riparian and weed sections.

#### **Visual Resources:**

The project area is within Visual Resource Management Category 2.

**Impacts of Alternative A (Proposed Action):** Under the proposed action, there will be short-term localized negative impacts to scenic values in the project area due to the presence of reintroduction pens and small disturbance from placing the artificial burrows. However the pens will be removed after about 1 month and site disturbance impacts are anticipated to be reduced to a negligible level after the first growing season.

**Impacts of Alternative B (No Action):** Impacts to visual resources are not anticipated from the no action alternative.

**Cumulative impacts to Visual resources:** None are anticipated due to VRM class II being maintained for LCNCA/SVAPD.

The following resources or elements are not affected by the proposed action or alternatives because they do not occur in the project area, or because of the nature of the proposed action: **Air Quality, Cultural Resources, Environmental Justice, Floodplains, National Energy Policy, Native American Religious Concerns, Prime Farmland, Wastes-Hazardous or Solid, Water Quality-Drinking or Ground, Wilderness**

#### **Description of Mitigation Measures:**

##### **Proposed Action Alternative A:**

1). Should any archaeological resources or vertebrate fossils be discovered during implementation of this project, all surface disturbing activities in the area of discovery shall cease and the Field Office Archaeologist will be notified. The archaeologist will evaluate the discovery and provide recommendations to the Authorized Officer. Surface disturbing activities shall not resume until permission is obtained from the Authorized Officer.

2) Any construction vehicles used on the project will be washed off prior to use on the site to minimize risk of introduction of exotic species.

**No Action:** No mitigation measures identified.

**Compliance and Area Monitoring:**

Monitoring activities are described in the Proposed Action.

**CONSULTATION AND COORDINATION**

**PREPARERS**

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**Persons and Agencies:**

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Doug Duncan, USFWS Fisheries Biologist

John Weins, Arizona Game and Fish Department

Tim Snow, Arizona Game and Fish Department

Mac Donaldson, Grazing Permittee

Sonoita Valley Planning Partnership

**Public Meetings and Public Involvement:**

AGFD made a presentation on the proposal at the February 2, 2008 meeting of the Sonoita Valley Planning Partnership (SVPP). Approximately 25 people were in attendance at the meeting representing a variety of interests.

AGFD held a public meeting in Sonoita on Thursday February 21, 2008. Approximately 20 people were in attendance representing ranching, environmental interests, and local community.

The proposal was discussed at the most recent BLM Arizona Resource Advisory Council meeting.

The proposal was discussed at the April 25, 2008 biological planning meeting on the Empire Ranch and two of five potential reintroduction sites were visited as part of the field tour.

An update on the proposal was given at the May 3, 2008 SVPP meeting with about 15 attendees representing a variety of interests.

BLM, AGFD, grazing permittee, and interested public from SVPP toured the proposed reintroduction sites on Las Cienegas NCA on May 19, 2008.

Additional public outreach activities are summarized in Appendix A

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## **Appendix A**

### **Black-tailed Prairie Dog Public Meetings & Presentations**

In March 2000, the Arizona Game and Fish Commission (AGFC) directed the Arizona Game and Fish Department (AGFD or Department) to pursue a 12-step evaluation of the feasibility of re-establishing the black-tailed prairie dog in Arizona. The Department completed step 5 of the process in August 2003 and began step 6 in October 2003. Step 6 has two major components: 1) solicit comment from public and appropriate agencies to identify issues and concerns regarding potential re-establishment of this species and 2) evaluate potential black-tailed prairie dog habitat.

AGFD held eight public meetings in southeastern Arizona during October 2003 (See list of locations below). Over 175 people attended the meetings, and AGFD collected approximately 200 written comments on the project concept of re-establishing black-tailed prairie dogs in Arizona. In addition to the 8 public meetings, AGFD biologists gave presentations on the 12-step process at 7 Natural Resources Conservation District (NRCD) board meetings, Fort Huachuca Military Reservation, and the Southeastern Arizona Cattlemen's Association's biannual meeting.

On November 19, 2003 Deb O'Neill attended the Eastern Arizona Counties Organization (ECO) board meeting in Phoenix. The board was going to seek approval of a "resolution to the Arizona Game and Fish Commission urging the review and stoppage of the twelve step reintroduction process for the Black Tailed Prairie Dog." After some members of the board attended AGFD's black-tailed prairie dog public meetings in October, they decided not to seek approval of the aforementioned resolution. Instead, the board approved a different resolution supporting AGFD's request to the U.S. Fish and Wildlife Service seeking removal of the black-tailed prairie dog from the Candidate species list.

Public comment was again solicited in 2008 after completion of the draft proposal for reestablishment. Recent meetings included on 2/2/08 with Sonoita Valley Planning Partners and a public meeting on 2/21/08 in Sonoita which was attended by approximately 20 people.

The Arizona State Land Department has been an active participant in the Black-tailed prairie dog working group. This is the group that developed the black-tailed prairie dog draft management plan for Arizona and that worked intimately on developing goals for reestablishment of the prairie dogs in to southern Arizona. AGFD has solicited letters of support/acknowledgment from them.

Since 2000, the Pima County Board of Supervisors has been on AGFD's list of invitees to all Black-tailed prairie dog working group meetings and any pertinent public meetings and AGFD has requested comment from them on all plans/proposals. The county has chosen to not be actively involved in the process, but is a part of the Eastern Arizona Counties Organization (ECO) which also received a presentation from Game and Fish Department personnel.

The Arizona Game and Fish Commission is very supportive of the project. The Commission has been formally involved in this effort 5 times (2000, 2001 & 2003, 2007, 2008). At each commission meeting, there has been an opportunity for the public to speak on issues being discussed. In particular, the Commission voted 5 – 0 in 2003 to direct the Department to continue with the 12-step process, develop a management plan, and bring back for public participation. Recently, the Commission even made the reestablishment of the black-tailed prairie dog in southern Arizona one of the AGFD Director's performance measures for 2008.

## Public Meeting Locations

Tuesday, October 14, 2003; 7:00 – 10:00 p.m.  
Willcox Community Center  
312 W. Stewart St.  
Willcox, Arizona 85643

Wednesday, October 15, 2003; 7:00 – 10:00 p.m.  
Cochise College Auditorium  
Douglas Campus  
4190 W. State Highway 80  
Douglas, Arizona 85607

Tuesday, October 21, 2003; 7:00 – 10:00 p.m.  
Benson Public Library Annex Meeting Room  
300 S. Huachuca St.  
Benson, Arizona 85602

Wednesday, October 22, 2003; 7:00 – 10:00 p.m.  
The International Wildlife Museum  
4800 W. Gates Pass Road (5 miles west of I-10 on Speedway)  
Tucson, Arizona 85745

Wednesday, October 23, 2003; 7:00 – 10:00 p.m.  
Stone House Pavilion  
The Phoenix Zoo  
455 North Galvin Parkway  
Phoenix, Arizona 85008

Tuesday, October 28, 2003; 7:00 – 10:00 p.m.  
Sonoita Fairgrounds, Santa Cruz County Fair and Rodeo Association Building  
3142 S. Highway 83  
Sonoita, Arizona 85637

Wednesday, October 29, 2003; 7:00 – 10:00 p.m.  
Buena Performing Arts Center at Buena High School  
5225 Buena School Blvd  
Sierra Vista, Arizona 85635

Thursday, October 30, 2003; 7:00 – 10:00 p.m.  
The Graham County General Services Administration Building  
921 Thatcher Blvd (just off of State Highway 70)  
Safford, Arizona 85546

Saturday, February 2, 2008; 10:00- 12:00 pm  
Sonoita Valley Planning Partners  
Sonoita Elgin Fire District Meeting Hall  
3173 Hwy 83  
Sonoita, AZ 85637

Thursday, February 21, 2008; 7:00- 10:00 pm  
Sonoita Elgin Fire District Meeting Hall  
3173 Hwy 83  
Sonoita, AZ 85637



## **NRCD Meeting Locations**

Gila Valley NRCD  
Meeting Location: Safford  
9/2/2003

San Pedro NRCD  
Meeting Location: Benson  
9/3/2003

Whitewater NRCD  
Meeting Location: Douglas  
9/9/2003

Redington NRCD  
Meeting Location:  
9/16/2003

Wilcox-San Simeon NRCD  
Meeting Location: Wilcox  
9/23/2003

Pima NRCD  
Meeting Location: Tucson  
9/23/2003

Hereford NRCD  
Meeting Location:  
2003

Comments received during AGFD public meetings on reestablishment (2003)

TOPIC/SUBTOPIC:	ECONOMIC IMPACT - LIVESTOCK INDUSTRY								
	Willcox	Douglas	Benson	Tucson	Phoenix	Patagonia	Sierra Vista	Safford	ALL
black-tailed prairie dogs are incompatible with livestock grazing	2	2	1	1		3		1	10
black-tailed prairie dogs are compatible with livestock grazing		1	1	1			1		4
prairie dog holes pose a safety risk to livestock, horses, and riders	2	2	1			1	1		7
prairie dog holes do not pose a safety risk to livestock, horses, and riders							1		1
concerned about land use restrictions on grazing permittees			1			2		2	5
longterm drought and prairie dog water use		1	2			1		2	6
ranchers do not like black-footed ferrets in Aubrey valley						1			1

TOPIC/SUBTOPIC:	REGULATORY/MANAGEMENT ISSUES								
	Willcox	Douglas	Benson	Tucson	Phoenix	Patagonia	Sierra Vista	Safford	ALL
re-establishing black-tailed prairie dogs will be a precursor for other species to be reintroduced	2	1	1		1		1	1	7
should not focus on single species management	2	1				1		1	5
general lack of trust of the government	1	1							2
Endangered Species Act is not authorized	1								1
the threat of critical habitat being designated is enough to make me want to re-establish black-tailed prairie dogs							1		1
do not understand black-tailed prairie dog no shooting policy (in AZ) if they are not here				1					1
should concentrate re-establishment efforts on state and public lands to minimize political aspect and private property concerns					1				1
if the black-tailed prairie dog is not listed on the Endangered Species List, protection won't be warranted					1				1
private property rights - citizens should be allowed to re-establish black-tailed prairie dogs to re-establish grasslands					1				1

<b>TOPIC/SUBTOPIC: HABITAT MODEL</b>									
	<b>Willcox</b>	<b>Douglas</b>	<b>Benson</b>	<b>Tucson</b>	<b>Phoenix</b>	<b>Patagonia</b>	<b>Sierra Vista</b>	<b>Safford</b>	<b>ALL</b>
belief that there is no public land in Arizona	1	1	1						3
habitat does not exist for black-tailed prairie dogs anymore or it is not suitable		1							1
old pleistocene soils are not good for black-tailed prairie dog habitat				1					1
habitat map model does not jive with elevation criteria								1	1
do not believe Fort Huachuca meets 2-mile criteria in habitat model							1		1
wish we could re-establish black-tailed prairie dogs in San Simon Valley because areas need to be restored; black-tailed prairie dogs will not destroy civilization as we know it							1		1
2-mile buffer needs to be defensible. The boundaries are arbitrary.					1		1		2
<b>TOPIC/SUBTOPIC: RANGE ID</b>									
do not believe black-tailed prairie dogs existed in southeastern Arizona	2	1		1		2		2	8

<b>TOPIC/SUBTOPIC: DISPERSAL CONTROL</b>									
	<b>Willcox</b>	<b>Douglas</b>	<b>Benson</b>	<b>Tucson</b>	<b>Phoenix</b>	<b>Patagonia</b>	<b>Sierra Vista</b>	<b>Safford</b>	<b>ALL</b>
will not be able to control dispersing black-tailed prairie dogs	4	3			1	1	3		12
belief that black-tailed prairie dogs behave like goats - move around and decimate areas	2	1				2			5
public is making too big a deal of dispersal; most prairie dogs will go to prairie dog heaven							1		1
<b>TOPIC/SUBTOPIC: HUMAN HEALTH AND SAFETY</b>									
plague concerns		2	2			1	5	1	11
monkeypox concerns						1	2		3
West Nile Virus concern			1						1
we should have several smaller re-establishment sites to mitigate plague threat				1					1
no plague in volunteers working with prairie dogs in New Mexico in 15 years							1		1
<b>TOPIC/SUBTOPIC: BENEFITS</b>									
black-tailed prairie dogs benefit the watershed			1				1		2
black-tailed prairie dogs are good for ecosystem mgmt		1	1					1	3
don't need black-tailed prairie dogs to break up soil because cattle do						1			1
it is a tragedy that extinction occurs						1			1
mosaic habitats that black-tailed prairie dogs maintain are important to fire management							1		1

<b>TOPIC/SUBTOPIC: 12-STEP PROCESS</b>									
	<b>Willcox</b>	<b>Douglas</b>	<b>Benson</b>	<b>Tucson</b>	<b>Phoenix</b>	<b>Patagonia</b>	<b>Sierra Vista</b>	<b>Safford</b>	<b>ALL</b>
disappointed that Arizona Game and Fish Commission members and Arizona Game and Fish Department management are not attending public meetings	<b>3</b>			<b>1</b>					<b>4</b>
still confused on why 12-step process is being continued after the commission vote not to approve the statewide black-tailed prairie dog management plan	<b>1</b>						<b>1</b>		<b>2</b>
feeling that Arizona Game and Fish Department are not reaching everyone	<b>1</b>		<b>1</b>						<b>2</b>
do not feel we should play god; black-tailed prairie dogs will come back eventually							<b>1</b>		<b>1</b>
12-step process doesn't guarantee reintroduction					<b>1</b>				<b>1</b>

<b>TOPIC/SUBTOPIC: CONSERVATION TEAM GOALS</b>									
	<b>Willcox</b>	<b>Douglas</b>	<b>Benson</b>	<b>Tucson</b>	<b>Phoenix</b>	<b>Patagonia</b>	<b>Sierra Vista</b>	<b>Safford</b>	<b>ALL</b>
if 1% historical habitat to re-establish black-tailed prairie dogs rangewide cannot be found, then there's a problem			1				1		2
feds forcing states to create mgt plan							1		1
Arizona does not need to re-establish black-tailed prairie dogs because 10 states have them		1							1
Conservation Team is making great strides for black-tailed prairie dog conservation			1						1
<b>TOPIC/SUBTOPIC: ECONOMIC IMPACT - GENERAL</b>									
worried about potential landowner compensation (mistrust of government programs in past)			1	1					2
consider positive benefits in economic analysis in addition to negatives								1	1
there will be economic benefit to Cochise County-- tourism to watch wildlife and recreational shooting							1		1
black-tailed prairie dog re-establishment is better than subdividing		1							1
believe there is room for all multiple land use if done correctly; MOUs should be in place before a critter is on ground								1	1
<b>TOPIC/SUBTOPIC: COSTS</b>									
make sure to include indirect costs in estimate								1	1
<b>TOTALS</b>	<b>24</b>	<b>21</b>	<b>17</b>	<b>8</b>	<b>7</b>	<b>18</b>	<b>27</b>	<b>15</b>	<b>137</b>

### **Comments received on proposal (2008)**

We received 50 comments on the Draft proposal.

- 34 Supporting
- 10 Against
- 6 Need Information/Pure Comments

Concerns:

- Private Lands
- Ecosystem fragility
- Monitoring
- Plague
- Historic Species?
- Two-mile Buffer
- Subspecies being reintroduced

Supporting Comments:

- Grassland restoration
- Keystone species
- Increase hunting opportunities
- New place for ferrets