

**SUPPLEMENTAL
ENVIRONMENTAL ASSESSMENT
For the
Cedar Ridge Golf Course and Paiute Tribal Land Habitat
Conservation Plan**

JULY 10, 2008

Lead Agency: U.S. Fish and Wildlife Service, Department of Interior

Legal Authority: Endangered Species Act of 1973, as amended, Section 10(a), as implemented by 50 CFR 17.32(b)(1) and 17.22(b)(1)

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1 INTRODUCTION

The Utah prairie dog (*Cynomys parvidens*) was listed as a Federally endangered species in 1973. Its status was downgraded to threatened in 1984 (USFWS 1973, 1984, 1991). At that time, a rule under section 4(d) of the Endangered Species Act of 1973, as amended (Act), was issued to allow regulated take of nuisance Utah prairie dogs on agricultural lands. A recovery team was formed to develop a recovery plan for the Utah prairie dog, which was approved on September 30, 1991. In 1994, based in large part to the cooperative efforts of federal and state agencies, the Recovery Implementation Team (RIT) was formed to oversee and guide recovery implementation for the species. In 1997, the RIT developed an Interim Conservation Strategy to direct recovery activities including habitat improvement and translocation efforts, as well as direct research activities to further improve conservation and recovery measures. A new recovery team was formed in 2006 to assist in the current effort to update and revise the 1991 recovery plan.

In 2006, the current Recovery Team was established to oversee the revision of the 1991 Recovery Plan and to work with the Recovery Implementation Team to implement recovery actions. Recovery Team members include biologists and other staff with expertise and/or experience with Utah prairie dogs from the U.S Forest Service, National Park Service, Natural Resource Conservation Service, BLM, Environmental Defense Fund, Farm Bureau, Utah Department of Wildlife Resources (UDWR), and Utah State University. All parties are involved in efforts to conserve and recover the Utah prairie dog using the best available commercial and scientific information and adaptive management practices.

The Utah prairie dog range is currently restricted to six counties in southwestern Utah with most animals concentrated in the Awapa, Paunsaugunt, and West Desert Recovery Areas. The primary objective of the Utah Prairie Dog Recovery Plan (USFWS 1991) is to reestablish Utah prairie dog populations on public lands and ensure the continued existence of the species. To date, approximately 13 new colonies have been established on public lands within the West Desert Recovery Area. Approximately 67 percent of Utah prairie dogs still occur on private and other non-federal lands (Day 2006). As of 2007, there were 519 Utah prairie dog colonies mapped in the West Desert Recovery Area, 287 colonies mapped in the Paunsaugunt Recovery area and 200 colonies mapped in the Awapa Recovery Area. Not all colonies are occupied every year. Mapped colonies are simply those colonies that have been documented since the species was listed in 1973. Recent survey efforts overseen by the Recovery Team have led to documentation of several previously unmapped Utah prairie dog colonies.

The Cedar Ridge Golf Course (Golf Course) and adjacent Paiute Tribal Land (Tribal Land) (herein collectively referred to as “covered lands”) occur in Cedar City, Utah, within the West Desert Recovery Area. Both these areas are used for a variety of recreational activities, such as golfing, powwows, playgrounds, and other sports, and require maintenance for those purposes. These areas also support high concentrations of Utah prairie dogs, which hamper these land uses. Utah prairie dog burrows and mounds create hazards to human safety and degrade the recreational quality of the Golf Course and Tribal Land, while Utah prairie dogs may be harmed or killed by some grounds maintenance activities. Therefore, Cedar City and the Paiute Tribe

(Tribe) applied for an incidental take permit (ITP) under section 10(a)(1)(B) of the Act to address this conflict.

Among other requirements for the issuance of an ITP, the applicants had to develop a habitat conservation plan (HCP). The HCP contains several measures to avoid, minimize, and mitigate the adverse effects to the Utah prairie dog from activities on the Golf Course and Tribal Land (further described in section 3.1 of this EA). The overarching goal of the HCP is to balance the recreational and maintenance needs on the Golf Course and Tribal Land with conservation of the Utah prairie dog in southwestern Utah.

In compliance with the National Environmental Policy Act (NEPA), the Service prepared a draft EA and provided it for 30 days of public review and comment on May 15, 2006. The Service responded to substantive comments and incorporated new relevant information in the Finding of No Significant Impacts (FONSI) and final EA on January 4, 2007. The Service issued ITPs to the applicants on January 5, 2007. Some changes occurred to the proposed action and circumstances, such as the likelihood of increased non-lethal take (described in detail below), that requires the Service to revisit the analyses in the EA. Therefore, the Service has prepared this supplemental EA to ensure that changes to the proposed action and estimates of incidental take made by the Service would not result in significant effects to the environment.

2 PURPOSE AND NEED FOR ACTION

2.1 Purpose of the Action

- Respond to the application by the Cedar City Corporation and the Paiute Tribe (Applicants) for an incidental take permit for the Utah prairie dog related to activities that have the potential to result in take, pursuant to section 10(a)(1)(B) of the Act and its implementing regulations and policies;
- Protect, conserve and enhance Utah prairie dogs and their habitat for the continuing benefit of the people of the United States;
- Provide a means and take steps to conserve the ecosystems depended on by the Utah prairie dog;
- Ensure the long-term survival of Utah prairie dog through protection and management of the species and their habitat;
- Ensure compliance with the Act, NEPA, and other applicable federal laws and regulations.

2.2 Need for the Federal Action

The need for the issuance of the ITP is based on the fact that activities proposed by the applicants on the Golf Course and Tribal Land could result in the take of Utah prairie dogs.

2.3 Need for the Applicants' Action

Utah prairie dogs occur throughout the golf course and parts of the Tribal land. The presence and activities of these animals are not compatible with the current use of these lands for recreational purposes. Prairie dogs on these lands have chewed and damaged wiring and irrigation system pipes and burrowed under paved golf course paths causing pothole damage. Mowers and vehicles used to collect golf balls have been damaged when wheels drop into prairie dog burrow holes. Burrow holes also could cause injuries to recreational users. Therefore, the applicants need to remove Utah prairie dogs from the Golf Course and Tribal Land to prevent hazards to human safety, and damage to maintenance vehicles and infrastructure.

2.4 Decisions to be Made

In compliance with NEPA, the Service will use this draft supplemental EA to identify and evaluate the potential impacts of the proposed action and alternatives, including direct, indirect, and cumulative effects of the issuance of the ITP, implementation of the HCP, and the effects of the proposed incidental take. Based on the analyses conducted in the draft supplemental EA and comments and information submitted during a public review of the EA, the Service will determine whether or not the proposed action would result in a significant impact to the human environment. If a finding of no significant impact is made, the Service will issue a final supplemental EA and FONSI. If the Service determines that the proposed action would result in significant impacts, an environmental impact statement must be prepared in compliance with NEPA.

The Service also has re-initiated intra-Service consultation, pursuant to section 7 of the Act, to determine if the potential increased take of Utah prairie dogs under the ITP would result in jeopardy of any federally listed species or adverse modification of designated critical habitat. The reinitiated consultation is occurring concurrently with this NEPA analysis.

Before issuing the ITP, the Service ensured that all requirements of section 10(a)(1)(B) of the Act (issuance criteria) were met. The following questions had to be answered affirmatively for the Service to grant an incidental take permit:

- Is the proposed take incidental to an otherwise lawful activity?
- Are the impacts of the proposed take minimized and mitigated to the maximum extent practicable?
- Has the applicant ensured that adequate funding would be provided to implement the measures proposed in the HCP?
- Is the proposed take such that it would not appreciably reduce the likelihood of the survival and recovery of the species in the wild?
- Are there any other measures that should be required as a condition of the permit?

Based on evaluation of the issuance criteria, the Service had to determine whether to deny the ITP, issue an ITP based on implementation of the proposed HCP, or issue an ITP with conditions that other measures specified by the Service be implemented under the HCP. The Service determined that the issuance criteria had been met and issued the ITP to the applicants. The Service must now use the analytical processes in the re-initiated section 7 consultation to

determine if increased incidental take would result in jeopardy of the continued existence of the Utah prairie dog and in the supplemental EA to determine if continued implementation of the proposed action would result in significant impacts to the human environment. The results of these analyses would determine if the Service should revoke the ITP, reissue an ITP based on modifications to the action consistent with the HCP and in cooperation with the permittees, or leave the ITP as is.

2.5 National Environmental Policy Act Responsibilities

This supplemental EA has been developed as part of the public process followed by the Service in deciding whether to issue a permit as required by the NEPA. The preparation of this document follows the guidelines in the Endangered Species Habitat Conservation Planning Handbook (U.S. Fish and Wildlife Service 1996) and other applicable sources and guidance for developing NEPA documents. This EA has been prepared in compliance with NEPA to identify and evaluate the potential impacts of the proposed Service action and alternatives. Issuance of the section 10(a)1(B) permit, as proposed, would require that the applicant, as well as the Service enter into an agreement for the implementation of the HCP. NEPA requires Federal agencies to evaluate and disclose the effects of their proposed actions on the human environment in a written statement that addresses:

- The environmental impact of the proposed action;
- Any adverse environmental effects that cannot be avoided should the proposed action be implemented;
- Alternatives to the proposed action;
- The relationship between short-term uses of the human environment versus the maintenance and enhancement of long-term productivity;
- Any irreversible and irretrievable commitments of resources that would be involved if the proposed action is implemented.

3 DESCRIPTION OF ALTERNATIVES

3.1 Alternative 1

Proposed (Preferred) Action

The proposed action is fully described in the HCP (Appendix A). Funding for this alternative is provided through the State of Utah, Iron County, Cedar City, Paiute Tribe, and with in-kind services from Utah Division of Wildlife Resources (UDWR) and the Bureau of Land Management (BLM).

This alternative would proceed in two phases. Phase 1 entails placing a perpetual conservation easement on 303 acres of Utah prairie dog habitat in the area known as Wild Pea Hollow within the West Desert Recovery Area to provide mitigation for the removal of prairie dogs from the Cedar Ridge Golf Course. The State Institutional Trust Lands Administration (SITLA) owned the land at the mitigation site at Wild Pea Hollow when the HCP was being developed. SITLA

is required to manage their lands and revenues generated from them in the most prudent and profitable manner possible, and not for any purpose inconsistent with the best interest of the trust beneficiaries. Thus, a potential existed for SITLA to develop lands at Wild Pea Hollow, and a conservation easement would protect this property from development and its impacts to the Utah prairie dog. Under the HCP, Iron County purchased Wild Pea Hollow from SITLA, and UDWR subsequently placed a conservation easement on the property and recorded it with Iron County on June 19, 2008. The conservation easement provides restrictions, conditions, and allowances that promote or are compatible with the easement's stated primary goal of protecting and conserving the Utah prairie dog. The easement prohibits any construction, development, or surface mining. Grazing and regulated hunting will be allowed to continue under the easement, as would vehicular use of an existing two-track road for allowed activities on the site and adjacent BLM land. The conservation easement also allows the use of approved pesticides and herbicides including rodenticides to control non-native species that may threaten the Utah prairie dog population at this site. The subsurface mineral rights are retained by SITLA.

Cedar City would strive to manage the golf course to be free of prairie dogs by live-trapping and translocating them to appropriate sites approved by the Utah Prairie Dog Recovery Team. All live-trapping and translocation activities will be carried out in accordance with the Recommended Translocation Procedures developed by the Utah Prairie Dog Recovery Team (Appendix 2 of the HCP in Appendix A of this document). Translocation of Utah prairie dogs would occur with oversight from UDWR. Monitoring of these activities on the covered lands would occur annually for the life of the permit.

The proposed alternative analyzed in the previous EA included lethal control of Utah prairie dogs remaining after the first two years of translocations. However, pursuant to section 10(a)(1)(B) of the ESA, lethal control could not be authorized in the incidental take permits issued to the Applicants. Therefore, in the absence of lethal control, live-trapping and translocation will occur throughout the life of the 20-year incidental take permit in an effort to meet the goal to manage the covered lands free of prairie dogs. This supplemental EA analyzes the proposed alternative with translocation as the only method for control of prairie dogs on the covered lands.

It was estimated that 604 Utah prairie dogs would be translocated from the golf course within the first 2 years under the HCP. However, based on an annual report submitted by Cedar City, 508 Utah prairie dogs were trapped and translocated during the 2007 trapping season. Information from the annual spring count by the UDWR and Cedar City's annual report suggests that concentrated trapping efforts in 2007 at given locations on the golf course reduced the number of prairie dogs found in those particular locations in 2008 (Brown, 2008). However, 2008 counts at untrapped areas of the golf course indicate that Utah prairie dogs increased, in some cases substantially. These increases represent high prairie dog overwinter survival rates likely due to very low to no predation and unlimited moisture-rich forage. Based on this new information, the Service has determined that the total number of prairie dogs that are likely to be live-trapped on the covered lands and translocated would be higher than the 604 originally predicted.

However, the number of prairie dogs that can be translocated in any given year from the covered lands will be limited by the availability of approved translocation sites. An approved

translocation site must meet the criteria identified in the Recommended Translocation Procedures. A number of factors can affect the ability of a site to meet the criteria such as drought and availability of agency landowner resources to prepare sites for releases. Therefore, the number of translocation sites likely to be available and suitable in any given year is difficult to predict. The Recommended Translocation Procedures target about 400 animals for release at any given site for 3 consecutive years. Because the goal of the applicants under this alternative is to maintain the covered lands free of Utah prairie dogs, the applicants are likely to trap and move the maximum number feasible depending on translocation site availability.

The first site approved by the Utah Prairie Dog Recovery Team for translocations from the golf course, per the HCP, was the Upper Berry Springs area of the Berry Springs complex, located in the Paunsaugunt Recovery Area. The 508 animals trapped from the covered lands were released at this site in 2007.

Phase 2 entails the restoration of 198 acres of the 303 acres at Wild Pea Hollow to increase available habitat to promote expansion of the existing colony of Utah prairie dogs at the site. Wild Pea Hollow was selected as the mitigation site based on a number of factors, including 1) occurrence of an existing colony of Utah prairie dogs on 19 acres of suitable habitat, 2) 198 acres of unoccupied habitat suitable for restoration, 3) 86 acres of adjacent buffer and foraging habitat compatibly managed by BLM, 4) connectivity with other occupied habitat that would allow for dispersal and genetic mixing, 5) distance and potential protection from existing and future development pressures, and 6) potential of future expansion of the population of Utah prairie dogs at the site after habitat restoration that would contribute to the recovery of the species. The HCP mitigation does not include translocation of prairie dogs from the covered lands to Wild Pea Hollow. Translocation to this site is not appropriate while an existing colony occurs there.

Phase 2 restoration entails reseeding approximately 115 of the 198 acres of potential habitat with a variety of grasses and forbs to increase plant diversity and forage availability for Utah prairie dogs. Some proposed restoration methods entailed thinning shrubs, controlled burning, and Dixie harrowing to be followed by seeding of native grasses and forbs. A natural burn occurred within the last decade, so actions to reduce shrubs were not necessary. In November, 2004, approximately 126 acres were seeded with a BLM-recommend mostly native seed mix of primarily grasses and some forbs. Observations indicate that vegetation criteria have not been met, likely due to drought conditions, so habitat restoration activities will continue at least until the criteria are met.

Grazing will continue under a grazing management plan in conjunction with adjacent BLM grazing permits. After habitat restoration at Wild Pea Hollow is completed, the site will be managed primarily by Iron County or by UDWR as stipulated in the HCP (Table 3 in Appendix A) for the benefit of the Utah prairie dog.

Biological monitoring at Wild Pea Hollow would occur by UDWR beyond the life of the permit. Success of the restoration efforts will be determined by monitoring vegetation and Utah prairie dogs throughout the site. Habitat restoration at Wild Pea Hollow will be considered successful if at least one of the two following criteria is met:

- 1) The Wild Pea Hollow prairie dog colony increases to 70 animals in the spring survey for 2 consecutive years.
- 2) Vegetation meets the vegetation guidelines identified by the Utah prairie dog Recovery Implementation Team (Appendix 4 of the HCP in Appendix A of this document) and supports Utah prairie dogs.

If the vegetation response is not adequate to provide Utah prairie dog habitat within the treated sites at Wild Pea Hollow or the prairie dog colonies fail to increase to at least 70 animals, a team of biologists from UDWR, the Service, BLM, the Tribe, and Cedar City will assess whether an adequate effort has been put forth or if further efforts (e.g., reseeding, harrowing etc.) by the permittees are necessary and appropriate.

BLM will conduct vegetation monitoring at the mitigation site via the currently approved methodology for at least two growing seasons following the treatments. If precipitation is below average for any of the two post-treatment monitoring years, an additional year of monitoring will be conducted by BLM for each below-average precipitation year. Monitoring of grazing and vegetation response to grazing will occur as defined within BLM's grazing management plan.

Wild Pea Hollow also will be monitored by Iron County for noxious weeds annually for the life of the permit. If monitoring results indicate the presence of a noxious weed, the site will be treated as necessary by methods appropriate for use in proximity to Utah prairie dogs, such as hand removal. All noxious weed control methods used within the colony will be coordinated with the Service and BLM.

BLM or UDWR will conduct Utah prairie dog surveys at Wild Pea Hollow annually according to the survey protocol (Appendix 1 of the HCP in Appendix A of this document) for the life of the permit. Should prairie dog numbers decline below the identified target of 70 animals for 3 consecutive years, a team of biologists from the UDWR, Service, and BLM will review and recommend appropriate actions to the permittees. These actions may include additional seeding, dusting for fleas to control plague, predator control, or translocation of Utah prairie dogs.

To ensure compliance with the avoidance and minimization measures outlined in the HCP (Appendix A) an annual report will be submitted by Cedar City to the Service by the Permittees with the following information: 1) trapping effort and the number of prairie dogs trapped and translocated from the Golf Course and the Tribal Lands, and the site(s) where they were released; 2) the results of all monitoring associated with Wild Pea Hollow identified in the HCP. The annual report also will include any problems identified at the Golf Course, Tribal Lands, and Wild Pea Hollow, and any resolution to those problems. Annual meetings may be held as necessary to ensure compliance with the HCP and Implementation Agreement.

Upon issuance of the permits, the permittees will establish an implementation committee. This committee will be comprised of a representative from the Service, BLM, UDWR, Paiute Tribe, Cedar City, and Iron County. During the removal of Utah prairie dogs from the Golf Course and the Tribal Lands, the implementation committee will meet annually to review progress and ensure all provisions of the HCP are being met.

3.2 Alternative 2

On-site Mitigation

This alternative would attempt to confine Utah prairie dogs to only the roughs of the golf course, which would entail about 8 to 10 acres. This area would be permanently managed specifically for Utah prairie dogs. The 13.5 acres of currently occupied Utah prairie dog habitat on the Golf Course and the remainder of the Golf Course, including currently unoccupied areas, would be managed to be free of Utah prairie dogs. Barriers, such as buried fencing, would be used the attempt to exclude the animals from these portions of the golf course.

This alternative is not feasible because, with a source population of Utah prairie dogs in the roughs, the rest of the golf course would be impossible to maintain free of the animals. Over time, prairie dogs would be able to burrow under even buried fencing, so such an effort would not be effective in excluding prairie dogs from the greens. Furthermore, fencing is not a feasible method for excluding prairie dogs from adjacent Tribal Land due to the extent of fencing that would be required. Moreover, the Utah prairie dog population on the Tribal Land would provide a continual source of animals dispersing into the greens of the golf course, thereby undermining the purpose and need for the action. This alternative also would not address prairie dog presence and incompatibility with land uses on the Tribal land. Under this alternative, the Wild Pea Hollow mitigation site would not be protected in perpetuity nor managed for the conservation of the Utah prairie dog.

3.3 Alternative 3

No Action

Under this alternative, Cedar City and the Paiute Tribe would not apply for a section 10(a)(1)(B) permit. Utah prairie dogs would continue to be present on the golf course and Tribal Land but controlled under the Iron County HCP which allows up to 300 Utah prairie dogs to be “non-permanently taken” annually across the whole county at “...developed recreational areas that still remain suitable as habitat...”. Because more than 300 Utah prairie dogs occur on the golf course and Tribal land, the Iron County HCP would not be sufficient to allow Cedar City and the Tribe to manage these lands to be free of Utah prairie dogs. Under this alternative, the Wild Pea Hollow mitigation site would not be protected in perpetuity nor managed for the conservation of the Utah prairie dog.

4 DESCRIPTION OF AFFECTED ENVIRONMENT

4.1 General Description of Golf Course/Tribal Land

These lands are within the Utah prairie dog West Desert Recovery Area. They are in the center of Cedar City on the east side of town. The Cedar Mountains rise from the eastern side of the Golf Course and quickly transition into piñon-juniper foothills that are undeveloped at this time. A portion of the lands to the east are privately owned but the majority is held by BLM. Much of the land to the north, west, and south of this area has been developed or soon will be because development permits for these lands have been issued.

4.2 General Description of Wild Pea Hollow

Wild Pea Hollow is within the Utah prairie dog West Desert Recovery Area. The average elevation of the Wild Pea Hollow land is 6,400 feet above sea level. The land consists of rolling foothills that historically were covered with basin big sagebrush (*Artemisia tridentata ssp. tridentata*) and a scattering of Utah juniper (*Juniperus osteosperma*). It is surrounded by BLM lands with access via a two-track trail on the west side of the parcel. In recent years, due to several range fires (both wild and controlled burns), much of the area has burned allowing native grasses and shrubs to become the dominant vegetation. The area is currently grazed on BLM-permitted sheep allotments.

4.3 Vegetation

4.3.1 Cedar Ridge Golf Course

The predominant vegetation of the Golf Course is Kentucky bluegrass (*Poa pratensis*) within the groomed fairways and greens with islands of native vegetation in the roughs. The native vegetation in the roughs consists of Indian rice grass (*Stipa hymenoides*), bottlebrush squirreltail (*Elymus elymoides*), needle-and-thread (*Stipa comata*), Hood's phlox (*Phlox hoodii*), Douglas rabbit brush (*Chrysothamnus viscidiflorus*), scarlet globe mallow (*Sphaeralcea coccinea*), and penstemon (*Penstemon spp.*).

4.3.2 Paiute Tribal Land

The predominant vegetation on the Tribal Land is a mix of cultivated lawns and disturbed lands of native and nonnative vegetation.

4.3.3 Wild Pea Hollow

The vegetative composition of Wild Pea Hollow is a mixture of native and nonnative vegetation. Black sagebrush (*Artemisia nova*), Indian ricegrass (*Stipa hymenoides*), bluebunch wheatgrass (*Agropyron spicatum*), Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*), and antelope bitterbrush (*Purshia tridentata*) are the major vegetation species for the area. A scattering of Utah juniper (*Juniperus osteosperma*) also is present in the area. Other miscellaneous forbs, perennial grasses and other shrubs are listed as occurring in the area. Cheatgrass (*Bromus tectorum*), a noxious weed, occurs on the site but has not spread and is not dominant. Other non-native vegetation also occurs on the site, but native vegetation predominates.

4.4 Wildlife

4.4.1 Cedar Ridge Golf Course and Paiute Tribal Land

A multitude of species may on occasion occupy the subject lands, including sage thrasher (*Oreoscoptes montanus*), sage sparrow (*Amphispiza belli*), horned lark (*Eremophila alpestris*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), northern goshawk (*Accipiter gentiles*), desert cottontail rabbit (*Sylvilagus*

audubonii), black-tailed jackrabbit (*Lepus californicus*), rock squirrel (*Spermophilus variegatus*), striped skunk (*Mephitis mephitis*), Botta's pocket gopher (*Thomomys bottae*), coyote (*Canis latrans*), American badger (*Taxidea taxus*), long-tailed weasel (*Mustela frenata*), and Utah prairie dogs.

4.4.2 Wild Pea Hollow

Most wildlife species associated with the Great Basin ecotype are expected to be present in the Wild Pea Hollow area. Some of the more common species are pronghorn antelope (*Antilocapra americana*), black-tailed jackrabbit, desert cottontail rabbit, mourning dove, sage thrasher, sage sparrow, horned lark, golden eagle (*Aquila chrysaetos*), red-tailed hawk, American kestrel (*Falco sparverius*), coyote, American badger, and Utah prairie dogs.

4.5 Endangered, Threatened, and Candidate Species

Five federally listed species and one candidate for listing occur in Iron County, within which the Golf Course, Tribal Land, and Wild Pea Hollow are located. All but the Utah prairie dog are not known to or are not expected to occur on these lands. The statuses of the species are listed below:

Southwestern willow flycatcher (*Empidonax traillii extimus*) – This federally endangered species occurs within riparian areas and nests primarily in mid-to-low elevation riparian habitat along rivers, streams, or other wetlands where a dense growth of willows or other woody vegetation are present. It is currently very rare throughout its range and breeds in the southwestern United States (and possibly northern Mexico), and winters in Central America and southern Mexico. Riparian habitat suitable for Southwestern willow flycatcher does not exist on the project lands.

California condor (*Gymnogyps californianus*) – In Utah, the California condor is designated as an experimental nonessential population of this federally endangered species. California condors prefer mountainous country at low and moderate elevations, especially rocky and brushy areas near cliffs. Colonies roost in snags, tall open-branched trees, or cliffs, often near important foraging grounds. California condors eat carrion, usually feeding on large items such as dead sheep, cattle, and deer. Although California condors are known to occasionally visit the nearby Kolob Canyon, they are not expected to occur on the project lands due to lack of suitable habitat, except possibly as an infrequent transient visitor.

Bald eagle (*Haliaeetus leucocephalus*) – The bald eagle is no longer federally listed in Utah. Only eight pairs bald eagle are known to nest in Utah and none occur in Iron County. Any likely use of covered lands would be infrequent migrant eagles passing through in the winter. Nesting and roosting habitat does not occur on project lands.

Mexican spotted owl (*Strix occidentalis lucida*) – The Mexican spotted is federally listed as threatened. In Utah, the Mexican spotted owl utilizes canyon habitats for nesting and forested habitats for dispersing and foraging. Mexican spotted owls in Utah breed and forage in steep-walled canyon complexes. These areas are typically cool, moist environments; however, owls

have been located in dry, arid habitats with minimal vegetation (U.S. Fish and Wildlife Service 1995). The habitat necessary to support this species does not occur on project lands.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) – This subspecies is a candidate for federal listing. The cuckoo prefers open woodland with clearings and low, dense scrubby vegetation, often associated with watercourses. In Utah, they prefer desert riparian woodlands comprised of willow Fremont cottonwood and dense mesquite (Hughes 1999). This habitat does not occur on project lands.

Utah prairie dog (*Cynomys parvidens*) – This species occurs on all project lands and is discussed in detail below.

Status

The range of the Utah prairie dog, which is limited to the southwestern quarter of Utah, is the most restricted of all four prairie dog species in the United States. As ascertained by Collier (1975), the species' distribution was much broader prior to control programs and, in the past, extended across the desert almost to the Nevada-Utah state line. At one time, the species was known to occur in approximately 700 sections in 10 areas of southwestern Utah. The total species population was estimated to be 95,000 animals prior to control programs in the 1920s (Turner 1979).

By the 1960s, distribution of the Utah prairie dogs was greatly reduced due to sylvatic plague caused by a non-native bacterium (*Yersinia pestis*), poisoning, drought, and human-related habitat alteration resulting from cultivation and poor grazing practices. Today, plague and loss of habitat from human-related activities continues to threaten the species as once small rural communities grow and expand into the agricultural areas. Studies by Collier and Spillett (1972) indicated that the Utah prairie dog had declined or been eliminated from major portions of its estimated historical range. By 1972, they estimated that there were 3,300 Utah prairie dogs in 37 separate colonies.

At the time of listing, the species was threatened with extinction due to habitat destruction, modification or severe curtailment of habitat; over-exploitation; disease; and predation. In 1984, due to increased prairie dog numbers on private lands in the Cedar and Parowan Valleys, where Utah prairie dog numbers climbed from a count of 627 in 1976 to 3,699 in 1982, the UDWR petitioned the Service to remove the Utah prairie dog from federal listing and develop a special rule under section 4(d) of the Endangered Species Act. This special rule would allow take of 5,000 animals annually between June 1 and December 31 on agricultural lands in Cedar and Parowan Valleys in Iron County. Upon reviewing all pertinent biological data, the Service determined that the Utah prairie dog was not currently in danger of extinction and published a final rule reclassifying the species to threatened and establishing the special rule 4(d) on May 29, 1984 (49 FR 22330). In June of 1991, the special rule was revised to include all agriculture land throughout the range of the species and to increase the take from 5,000 to 6,000 animals annually (USFWS 1991b). In February, 2007, the Service found that a petition to reclassify the Utah prairie from threatened back to endangered did not provide scientific or commercial information indicating reclassification may be warranted.

Utah prairie dogs occur in principal concentrations in three areas: the Awapa Recovery area, the Paunsaugunt Recovery Area, and the West Desert Recovery Area of southwestern Utah. Each spring, before the young of the year have emerged, the UDWR surveys all known colonies to count the number of adults. Annual counts most likely underestimate the actual number of adult animals present because only 40 to 60 percent of prairie dogs are above ground at any one time (Crocker-Bedford 1975). The literature also suggests that approximately 67 percent of the adult population is female and that, although 100 percent of females copulate as yearlings, only about 67 percent of females actually wean a litter (Hoogland 2001). Each female produces an average of 4 pups. Based on this information the following calculation can be made to estimate the total population: 1) to estimate the total number of adult prairie dogs, double the above-ground spring count; 2) take 67 percent of that amount to estimate the number of adult females; 3) then take another 67 percent of the number of adult females to estimate the number of that breed; 4) then multiply that number by 4 to estimate the number of offspring for that year; 5) and finally add the number of offspring to the estimated total adult prairie dogs calculated in step 1. In the rest of this document, all population counts will be followed by the total population estimate in parentheses based on these calculations.

These numbers do not represent a true census but indicate trends in the adult population. The decreasing trend in adult Utah prairie dog counts prior to 1972 stabilized by the mid-1970s (Heggen and Hasenyager 1977), and adult numbers vacillated greatly over the next 20 years (McDonald 1993). Range wide adult counts have been as high as 7,400 (41,375 estimated total) in the 1989 spring census count (Coffeen 1989) with a low count of 3,500 (19,569 estimated total) animals in 1992, largely due to climatic and disease factors (McDonald 1993). Recent adult numbers continue to exhibit fluctuating trends. Range wide spring adult counts conducted by the UDWR in the past 5 years (2003 – 2007) along with corresponding total population estimates are 5,381 (30,086 estimated total), 5,524 (30,886 estimated total) and 5,441 (30,422 estimated total) respectively. Range wide adult counts for 2008 have not yet been reported.

Life History

Utah prairie dogs are true hibernators and spend 4 to 6 months of the year underground (Hoogland 2001). They emerge in the spring to begin breeding around mid-March to mid-April, depending on elevation. Approximately two-thirds of the adult population is female due to the higher mortality rate for juvenile males, thought to be caused by conflicts with adult males and greater dispersal (Wright-Smith 1978, Mackley et al. 1988, USFWS 1991a, Hoogland 2001). Although 100 percent of females copulate as yearlings, only 67 percent of females actually wean a litter (Hoogland 2001). Generally, females give birth to 1 litter per year, with an average of 4 young which are born in April after a gestation period of 30 days (Pizzimenti and Collier 1975, Wright-Smith 1978, Mackley et al. 1988, Hoogland 2001). Young appear above ground at 5 to 7 weeks of age, are full grown by October of their first year and reach sexual maturity at 1 year. Less than 50 percent of both males and females survive the first year (Hoogland 2001). Only about 20 percent of females and less than 10 percent of males survive to age 4 (Hoogland 2001). Both natal dispersal (movement of first year animals away from their area of birth) and breeding dispersal (emigration of a sexually mature individual from the area where it copulated) are male-biased, which leads to loss of young males from the colony as well as to higher mortality through

predation (Hoogland 2003). Such low survivorship severely limits prairie dog reproduction (Hoogland 2001). Utah prairie dogs rarely live beyond 5 years (Hoogland 2001).

Utah prairie dogs are found in elevations from 5,400 feet on valley floors up to 9,500 feet in mountain habitats. Utah prairie dogs forage primarily on grasses and forbs, and tend to select those with higher moisture content (Crocker-Bedford 1976). They often select colony sites in swales where the vegetation can remain moist even in drought conditions (Collier 1975, Crocker-Bedford and Spillet 1981). Ritchie and Brown (2005) found that plant seeding in Utah prairie dog transplant areas increased plant diversity, and prairie dogs were more likely to use or persist in seeded areas. Vegetation must be short in stature to allow the prairie dogs to see approaching predators as well as have visual contact with other prairie dogs in the colony (Collier 1975, Crocker-Bedford and Spillet 1981). Prairie dogs will avoid areas where brushy vegetation dominates, and will eventually decline or disappear in areas invaded by brush (Collier 1975, Player and Urness 1983). Soils need to be well drained for burrow sites. Burrows must be deep enough to protect the prairie dogs from predators as well as environmental and temperature extremes.

Predators of Utah prairie dogs include badgers, coyotes, raptors, fox, and weasels. In an established prairie dog colony, predators do not make a significant impact. Conversely, they have a large impact on translocation sites where an established social system or burrow system is not yet present.

Utah prairie dog populations are highly susceptible to sylvatic plague, caused by a bacterium introduced to the North American continent in the late 1800s (Cully 1993). Fleas are the vectors that spread the disease and can be brought into the vicinity of a prairie dog colony by a suite of mammals. We have limited understanding of the variables that determine when and under what conditions sylvatic plague will impact prairie dog populations.

Recovery Efforts

The primary objective of the Utah Prairie Dog Recovery Plan is to reestablish Utah prairie dog populations on public lands (USFWS 1991) and ensure the continued existence of the species. In 1972, the UDWR initiated a transplant program to move animals from private agricultural lands to areas of historical occupancy on public lands. Over a 31-year period from 1972 to 2002, more than 19,561 Utah prairie dogs were translocated to public lands (Bonzo 2003). Although initial survival was low, the number of Utah prairie dog colonies on public lands has increased. Increases in the known number of active colonies on public land can be attributed to a combination of factors, including the translocation program, natural increases and distribution from existing sites, and discovery of previously unrecorded colonies. To date, the following 13 colonies have been established on public lands through translocation within the West Desert Recovery Area: Adams Well, Buckskin Valley, Coyote Pond, Dominguez-Escalante, Horse Valley, Horse Hollow, Long Hollow, Lund West, Minersville 3, Pine Valley 10A, Pine Valley 8, Tebbs Pond and Willow Springs. Despite the efforts at establishing new Utah prairie dog colonies and supplementing existing ones on public lands, approximately 67 percent of Utah prairie dogs still occur on private and other non-federal lands (Day 2006).

Activities identified in the Interim Conservation Strategy have been underway including research on the impacts of grazing on Utah prairie dogs and the effects of habitat improvement on the success of translocation of Utah prairie dogs.

Cedar Ridge Golf Course/ Paiute Tribal Land

Utah prairie dogs currently occupy 13.5 acres of the Golf Course's 503 acres and occur on both the roughs and greens. On the adjacent 48 acres of Tribal Land, Utah prairie dogs currently occupy 4.5 acres of the powwow and dirt areas around a playground. Potential Utah prairie dog habitat on Tribal Land includes undeveloped areas, the playground, and the powwow gathering area, totaling approximately 26 acres.

The UDWR conducts a survey of Utah prairie dogs once per year on the covered lands. UDWR follows the standard survey protocol to minimize variables that could bias results, such as weather, time of day, and presence of raptors. However, not all variables can be avoided. Therefore, between factors that can influence the survey and the natural fluctuations of prairie dog populations, as with prairie dog surveys throughout its range, these surveys do not provide a true census of the population but serve as an indicator of the general status and trends of the population.

In 2008, UDWR counted 311 Utah prairie dogs on the Golf Course and 97 on Tribal lands (Table 1). The estimated current total population on these lands based on these counts would be approximately 1,739 on the Golf Course and 542 on Paiute lands for a total of 2,184 Utah prairie dogs.

No natural habitat for the Utah prairie dog occurs on these lands. Occupied acres and prairie dog numbers on these lands fluctuate greatly. Utah prairie dog numbers can get quite high (Table 1) there due to artificial conditions, such as unnaturally high moisture, abundant forage in the form of turf grasses, and the relative lack of predators due to the presence of humans. These high densities are vulnerable to plague outbreaks which can result in colony crashes. This colony (including the animals on the Tribal Land) is isolated from all other populations and other suitable habitat due to surrounding development. Some lands within the quarter-mile dispersal distance of the covered lands are occupied by token numbers of Utah prairie dogs. However, these occupied areas are highly fragmented and the number of animals remaining is not sustainable for persistence. Development in intervening areas presents barriers to successful dispersal among these areas and fragmenting the colony on the covered lands. Therefore, the colony on the golf course and Tribal land does not contribute to the long-term survival and recovery of the species.

A January 30, 2008, report submitted to the Service by Cedar City indicates that 508 Utah prairie dogs were live-trapped and translocated by UDWR during the 2007 trapping period. Despite the removal of this number of animals, the 2008 spring survey resulted in a count of 408 animals (2,281 estimated total) (Table 1). This is likely attributable to high survival and recruitment in the remaining colony due to the aforementioned artificial conditions.

Table 1. Annual spring count of Utah prairie dogs at the Cedar City Golf Course, conducted by Utah Division of Wildlife Resources using standard survey methods.

Location	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Golf course hole 5	**	**	**	2	0	2	13	See 4 & 5	See 4 & 5	See 4 & 5
Golf course hole 4 &5	**	**	**	0	0	0	2	20	20	35
Golf course hole 6	**	**	**	1	2	0	13	5	18	52
Golf course hole 2	**	**	**	2	1	6	13	15	27	54
Golf course hole 8	**	**	**	3	1	0	1	7	18	9
Golf course hole 1,8 & 9	**	**	**	10	7	8	33	36	60	61
Golf course hole 18 east	**	**	**	2	2	3	5	8	9	20
Golf course hole 18 west	**	**	**	3	4	6	8	13	28	3
Golf course hole 14 & 15	**	**	**	11	6	6	15	28	168	15
Golf Course hole 17	**	**	**	**	**	**	**	**	0	5
Golf course Driving Range	70	9	26	3	5	2	9	10	NC	57
Golf course totals	70	9	26	37	28	33	112	142	348	311
Paiute lands*	44	38	13	27	15	38	41	69	83	97
Grand Totals	114	47	39	64	43	71	153	211	431	408

* Paiute Tribal Land includes both the ball field and the Tribal restoration gathering area (Powwow Land)

** 1999-2001 counts on Cedar Ridge Golf Course were not broken down according to holes until the spring counts of 2002.

Berry Springs

The Berry Springs complex is located within the Paunsaugunt Recovery Area on a high elevation plateau at 7800 feet. The area and all surrounding land is owned by the U.S. Forest Service and managed as part of the Dixie National Forest. Approximately 800 acres was burned several years ago and the current predominant vegetation is a mix of both native and non-native grasses and forbs.

The complex supports approximately 11 Utah prairie dog colonies (Brown 2008I). The translocation site used for the covered lands is in the Upper Berry Springs area within the larger Berry Spring complex. The translocation site is within dispersal distance of the other colonies in the complex as well as other colonies on the plateau outside the complex. Thus, a re-established colony at this translocation site will have connectivity with other several other colonies. In 2008, spring counts found 24 adult prairie dogs (134 estimated total) in the release area within Upper Berry Springs.

Utah prairie dogs were translocated from sites other than the covered lands to release sites in the Lower Berry Springs area in the early 2000s. In 2008, 24 adult prairie dogs (134 estimated total) were counted in Lower Berry Springs. Sixteen adults (89 estimated total) were counted throughout the remaining nine colonies within the Berry Springs complex.

To examine ways to improve translocation rates, the Recovery Team initiated a pilot study in 2007 incorporating the use of nest boxes at the site where Utah prairie dogs from the covered lands were released. A paired study was conducted with half of the release sites containing nest boxes and half without nest boxes. Results are pending.

Wild Pea Hollow

The 303-acre Wild Pea Hollow mitigation site is part of the larger Wild Pea Hollow complex and is within the West Desert Recovery Area. The complex supports 11 Utah prairie dog colonies. Up until 2007, the Utah prairie dog had been using 19 acres of the mitigation site. Based on the existing plant community and soil types, 198 unoccupied acres are potentially suitable for Utah prairie dogs. Approximately 86 acres would never be occupied by Utah prairie dogs because shallow soils and rocky outcroppings on this acreage are not suitable for burrowing.

Counts conducted from 1996 through 2006 for the Wild Pea Hollow complex resulted in an increase from 3 adult animals (13 estimated total) to 417 (2,231 estimated total) in 2006. The Wild Pea Hollow mitigation colony increased from none in 1996 to 113 (632 estimated total) in 2006. In 2007, the population at the Wild Pea Hollow complex, including the colony at the mitigation site, experienced a dramatic decline. A total of 7 animals were counted throughout the complex with only 1 at the mitigation site. In spring 2008, just 1 was counted again at the mitigation site, but numbers increased to 10 in the rest of the complex (Brown 2008 pers. comm.). Disease (likely plague) is suspected as the primary cause of the decline, although not confirmed due to lack of animals to test. However, other factors also could have contributed, such as drought and a resulting insufficient forage base.

Efforts to address the decline are underway as directed in the HCP, which include applying an insecticide to control fleas (the primary carrier of plague) and continued habitat restoration. The connectivity of the colony at the mitigation site to other colonies within the Wild Pea Hollow complex is expected to allow for natural recolonization of the site. However, if recolonization of the site does not occur naturally within 3 years and risk of plague is addressed through flea control, translocation of animals to the site will be implemented.

4.6 Wetlands

No wetlands occur on the Golf Course, Tribal Land, or Wild Pea Hollow.

4.7 Geology/Soils

4.7.1 Cedar Ridge Golf Course and Paiute Tribal Land

Topography

Most of the Golf Course is situated on an alluvial fan with a 2 to 5 percent slope. The elevation ranges from 5,600 to 6,000 feet above sea level.

Soils

Ashdown loam and similar soils comprise 85 percent of the soils. The soils are loam, silt loam, fine sandy loam, clay loam, sandy loam, silty clay loam, or sandy clay loam. The mean annual soil temperature at depths of 20 inches ranges from 50 to 53°F. The moisture control section is continually dry in all parts for 60 to 75 days during the summer, and is continually moist in all parts for 60 to 75 days during the winter and early spring. The moisture regime is aridic bordering on xeric.

4.7.2 Wild Pea Hollow

Topography

Much of the landform is a dissected fan remnant with a 2 to 15 percent slope. The elevation ranges from 6,000 to 7,000 feet.

Soils

Pavant and similar soils make up 85 percent of the soils. Ashdown, Muleypoint and Tombar soils make up the other 15 percent of the soil type. The Pavant soil type is generally shallow (10 to 20 inches) and is well drained. The top 14 inches is cobbly loam and gravely loam underlaid with indurated carbonate hardpan. The mean annual soil temperature is 47 to 52°F. These soils are moist in the moisture control section more than 50 percent of the time that the soil temperature is above 41°F, and are continually dry for more than 60 consecutive days during the summer months in more than 7 out of 10 years. The particle size control section contains 0 to 15 percent rock fragments which are dominantly gravel and cobble size. Clay content is 18 to 27

percent. The presence of an existing colony of Utah prairie dogs at this site demonstrates that these soils are suitable for this species.

4.8 Land Use

4.8.1 Cedar Ridge Golf Course

The Golf Course hosts an average of 225 golfers per day with peak activity from mid-February thru mid-December, totaling 6,000 golfers per month. The Golf Course is open year round for golfing. The land is maintained by grounds keepers throughout the year.

4.8.2 Paiute Tribal Land

Buildings, houses, a parking lot, a playground, a powwow gathering area, and some undeveloped areas which are proposed for future housing, a health clinic and other various developments occur on the Tribal Land. Outdoor activities take place most of the year and especially spring through fall. Recreational activities include sports, powwows, and use of the playground.

4.8.3 Wild Pea Hollow

As a result of the HCP, Iron County purchased this site in fee title through funding from Utah's Endangered Species Mitigation Fund. Subsequently, in accordance with the HCP, a conservation easement was placed on the site by UDWR.

The land was historically leased for grazing and hunting and these activities can continue under the conservation easement as long as they are compatible with or contribute to the management and conservation of the Utah prairie dog at the site.

4.9 Air Quality

4.9.1 Cedar Ridge Golf Course and Paiute Tribal Land

Most of Iron County, where the project properties are located, is rural, while Cedar City is a relatively small urban area with no major polluting industries. All relevant air quality standards are met in Cedar City and the county.

4.9.2 Wild Pea Hollow

Wild Pea Hollow is located in an undeveloped area where all relevant air quality standards are met.

4.10 Water Resources

4.10.1 Cedar Ridge Golf Course and Paiute Tribal Land

The Golf Course has only one artificial pond which is less than an acre in size. It also has a man-made drainage, which is only filled when it rains. No water resources occur on the Tribal land.

4.10.2 Wild Pea Hollow

No water resources occur at this site.

4.11 Cultural Resources

4.11.1 Cedar Ridge Golf Course and Paiute Tribal Land

No sites on the golf course and Tribal land are known to have any cultural significance.

4.11.2 Wild Pea Hollow

The Utah State Historic Preservation Office and UDWR, in conjunction, conducted a cultural resource survey and determination of potential effects to the resources. Three lithic scatter sites were found in the survey area; one large site, in the northern portion of the area; and two small sites, in the mid to southern portions of the area. Based on the evidence, the area is said to have been a temporary hunting ground. It has been recommended to avoid the use of tractors or other ground-disturbing equipment on these cultural sites (Appendix B).

5 ENVIRONMENTAL CONSEQUENCES

5.1 Alternative 1- Proposed (Preferred) Alternative

5.1.1 Vegetation

5.1.1.1 Cedar Ridge Golf Course and Paiute Tribal Land

The vegetation at the Golf Course and the Tribal Land would not be significantly affected under Alternative 1. Some vegetation in the roughs may increase if the Utah prairie dog colony is significantly reduced or entirely removed, because the animals would no longer be consuming it or destroying it by burrowing. Fairways and greens would continue to be managed by mowing and herbicide applications. Any changes in vegetation from this alternative would be beneficial to the intended recreational purposes on these lands. Reductions or complete removal of Utah prairie dogs from these lands under this alternative would not result in any significant adverse effects to the vegetation.

5.1.1.2 Wild Pea Hollow

Under the proposed alternative, vegetation would be directly affected by mechanical treatments and seeding for the purpose of restoring Utah prairie dog habitat. Restoration is likely to result in a change in percent composition from mainly sage brush to mainly grasses and the reduction of cheatgrass, as intended. As the Utah prairie dog population increases in response to habitat restoration, more ground disturbance can be expected from the digging of additional burrows. The insecticide used for fleas to control plague is not known to have any effects to vegetation. This alternative would not result in any significant adverse effects to the vegetation on this site, but is expected to improve it for Utah prairie dog use.

5.1.2 Wildlife

5.1.2.1 Cedar Ridge Golf Course and Paiute Tribal Land

Because none of the wildlife at the Cedar Ridge Golf Course and Tribal Land (see Section 5.1.3) are prey of or depend on the presence of Utah prairie dogs, the reduction or removal of the prairie dogs on these lands would not affect other wildlife species. Extensive human activity on these lands largely prevents potential predators of Utah prairie dogs (e.g., red-tailed hawk, coyote; see section 5.1.3) from depending on the prairie dog as a primary source of food on these lands. Therefore, reduction or removal of prairie dogs under this alternative would not significantly affect these predators.

5.1.2.2 Wild Pea Hollow

On the whole, wildlife species at Wild Pea Hollow would benefit from protection from development through the perpetual conservation easement placed on the site under the proposed alternative. Grazing, hunting, and vehicular access allowed under the conservation easement would not increase or expand beyond previous levels and would be managed for the conservation of the Utah prairie dog, which in turn would benefit other wildlife species.

The suite of species associated with Utah prairie dogs and their habitat at Wild Pea Hollow would also benefit from the habitat restoration intended for the prairie dog. Predators such as raptors, coyotes and badgers may benefit from an increase in prey availability as prairie dog numbers increase. On the other hand, some sagebrush-dependent species, such as sage sparrows, pronghorn antelope, and pygmy rabbits, may experience a reduction of foraging or nesting sites with the restoration of grasslands from sagebrush at the site. However, sagebrush habitat is plentiful in surrounding areas that could be used alternatively by individuals of these species. Deltamethrin, the insecticide used to control fleas that carry plague, when applied at the recommended 4 grams per burrow, will may decrease some non-target species as well as increase other non-target species (Biggins 2003). Therefore, it is believed that the use of Deltamethrin will have minimal effects to invertebrate species other than fleas, which in turn may result in a small reduction of prey availability for some wildlife species. However, significant indirect effects to wildlife species from dusting for fleas have not been observed or documented. Therefore, this alternative is not likely to result in significant adverse affects to wildlife species at Wild Pea Hollow and may benefit some species.

5.1.3 Endangered, Threatened, and Candidate Species

Except for the Utah prairie dog, none of the listed or candidate species or their potential habitat described in section 4.5 of this document are known to occur on any of the project lands involved with Alternative 1. Therefore, none of the activities proposed in this alternative are likely to affect these species.

Utah prairie dog

Under the proposed alternative and in accordance with the HCP, 508 Utah prairie dogs were live-trapped from the golf course and translocated to release sites at Berry Springs. None of these

prairie dogs were injured or killed in the process of trapping, transporting, and release. The continued adherence to the Recovery Team's Recommended Translocation Procedures under this alternative would keep any injuries or deaths of prairie dogs at very low levels or prevent them altogether.

Translocation of live-trapped prairie dogs from covered lands to approved translocation sites is identified as a recovery action in the 1991 Utah Prairie Dog Recovery Plan. Therefore, continued translocation of prairie dogs from the covered lands to translocation sites approved by the Recovery Team is expected to contribute to the recovery of the species. Retention of translocated Utah prairie dogs is known to be low -- generally less than 10 percent. However, the exact causes (and their relative proportions) of loss of translocated animals is not known. Some of these animals may disperse to other sites, die of natural causes unrelated to translocation, and die due to causes related to translocations although such causes have not been determined. Calculated retention percentages based on estimates of total population numbers incorporating reproduction and recruitment would be higher than those based merely on the count of above-ground adult animals.

The UDWR spring count of 24 Utah prairie dogs at the Berry Springs translocation site in 2007 suggests that approximately 48 adults were able to obtain adequate forage to achieve sufficient fat stores to survive the winter (remember that above-ground counts represent approximately half the actual number of adults present). It also suggests that the animals had sufficient burrow systems to avoid predators. The goal of translocation in Utah prairie dogs is to create the foundation of a persistent colony by establishment of the founding members of that colony that will function within the population dynamics of a greater complex of colonies. The 134 estimated total of animals (based on reproduction and recruitment calculations) at the translocation site is should be sufficient to achieve this goal.

As discussed in section 3.1 Alternative 1 of this document, the number of Utah prairie dogs that would be translocated from the covered lands will be determined by the availability of approved suitable translocation sites. Because the goal of the HCP under the proposed alternative is to manage the covered lands to be free of Utah prairie dogs, our analysis will include the effects of the translocation of all Utah prairie dogs from the covered lands. As previously explained, the colony at the golf course and Tribal land exists under highly artificial conditions and is isolated from other colonies and populations by development. Occupied areas within dispersal distance of covered lands support small remnants of displaced Utah prairie dogs. Development within intervening areas presents barriers to dispersal of Utah prairie dogs between the covered lands and occupied fragments. Because very limited, if any, connectivity exists between the colony on the covered lands and other viable Utah prairie dog colonies, that colony does not contribute to the persistence of other populations of Utah prairie dogs in the recovery area. Without connectivity, genetic exchange essential to maintaining genetic viability of populations would not occur. In addition, the lack of connectivity precludes the colony on the covered lands from a functional role in the population dynamics of Utah prairie dogs. In conclusion, the reduction of this colony to small numbers or complete elimination under this alternative would not significantly affect the species because the colony does not contribute to the long-term survival and recovery of the Utah prairie dog.

Furthermore, this alternative would result in a net conservation benefit to the Utah prairie dog because the loss of the unimportant colony on the covered lands would be replaced by the protection and expansion of the Utah prairie dog colony at the Wild Pea Hollow mitigation site. The 18 acres of occupied artificial habitat on the covered lands would be replaced by 19 acres of occupied prairie dog habitat plus 187 acres of restored habitat that would allow growth and expansion of the Utah prairie dog colony. The loss of the artificial prairie dog habitat on the covered lands constitutes less than 0.2 percent of occupied habitat within the West Desert Recovery Area and an even smaller fraction of occupied areas for the entire species.

The perpetual conservation easement on the mitigation site at Wild Pea Hollow, along with the surrounding buffer lands owned and managed by BLM, would ensure protection of the site's colony of Utah prairie dogs from development and continued connectivity with other colonies in the area. Grazing, hunting, and vehicular access allowed under this easement would be managed specifically to ensure conservation of the Utah prairie dog. Grazing is a management tool that can benefit the Utah prairie dog by ensuring vegetation composition and structure suitable for the species. Grazing would contribute to the maintenance of habitat dominated by grasses and forbs, which provides prairie dogs with forage. Grazing would also help keep vegetation at lower heights essential for prairie dogs to maintain visual social contact and vigilance for predators.

Although a small minority of hunters may illegally kill Utah prairie dogs, the level of such illegal take due to this alternative is not expected to increase over whatever current levels may be occurring. In fact, such illegal take may decrease as hunters become aware of the special protections conferred to the species at this site under this alternative.

Because the conservation easement stipulates that vehicular access would be restricted to the two-track road and be used for only the other allowed activities, significant disturbance and destruction of the burrows and Utah prairie dog habitat at the mitigation site is not expected. Any unauthorized off-road use of vehicles at the site under this alternative would not be expected to increase beyond current levels. Just as with hunting, such unauthorized use may decrease as drivers become aware of the special protections conferred to the species at this site under this alternative.

Although subsurface mineral rights have been retained by SITLA at the mitigation site, extraction of such minerals is not expected in the near future. Southwestern Utah, where the mitigation site occurs, is not under the same level of energy development pressure as other parts of the state. The Service has been consulted for effects to listed species from only a couple seismic exploration projects in southwestern Utah in the last few years, which indicates that some potential for oil and gas development exists. BLM has authorized some leases in the area but requires a number of stipulations to ensure conservation of the Utah prairie dog in any issued development leases. One primary restriction would be that no surface occupancy or disturbance could occur within 0.5 mile of any active Utah prairie dog colonies, and permanent surface disturbance or facilities cannot occur within 0.5 mile of potentially suitable, unoccupied prairie dog habitat. SITLA determines appropriate measures to avoid or minimize effects to listed species from surface access on a case-by-case basis and through coordination with the surface owner and appropriate agencies. Therefore, any access to subsurface mineral rights is not likely to result in significant effects to the Utah prairie dog at the mitigation site.

Initial habitat restoration efforts at the Wild Pea Hollow mitigation site have had mixed results, most likely due to drought conditions. Under this alternative, restoration efforts will continue into the future until success criteria identified in the HCP are met. A small possibility exists that individual Utah prairie dogs may be harassed or harmed by equipment used during mowing or seeding, but the risk would be minimized by conducting such activities during the season when Utah prairie dogs are least active. Successful habitat restoration would allow the Utah prairie dog colony at this site to increase in number and expand into restored habitat. A larger population at this site would increase the chances for dispersal and genetic exchange with nearby colonies, thereby contributing to the ability of those populations to adapt to environmental changes. Such benefits would greatly outweigh the risk of any minimal effects from losses of individuals during habitat restoration activities.

The recent decline of the Utah prairie dog at the Wild Pea Hollow complex may be a temporary setback in the mitigation effort, but mitigation goals are still expected to be achieved. Although the count of above-ground adults at the colony at the mitigation site has been only one after the crash, other colonies in the complex have been increasing and are fully expected to be a source for recolonization of the mitigation site. Current efforts to dust for fleas that may be carrying the plague bacterium and any necessary continued reseeding to counteract drought effects to vegetation, in accordance with the HCP under this alternative, would provide conditions conducive to such recolonization.

Both the conservation easement and habitat restoration at Wild Pea Hollow under this alternative implement recovery actions consistent with the 1991 Utah Prairie Dog Recovery Plan. Neither action is expected to result in any significant adverse effects to the Utah prairie dog. Because the loss of the colony on the covered lands would not result in significant effects to the Utah prairie dog, and the translocation of the animals from the covered lands along with the conservation easement and habitat restoration at Wild Pea Hollow, would contribute to the recovery of the species, the proposed alternative would result in a net conservation benefit to the Utah prairie dog.

Although the original draft EA included lethal trapping in its analysis of effects of the proposed alternative, the analyses in the intra-Service biological opinion and for the issuance of permits were based on the use of live-trapping only. In all these documents as in this supplemental EA, the Service concluded that the population of Utah prairie dogs on covered lands did not contribute to the long-term survival or recovery of the species due to its isolation and artificial nature and that the permanent loss of the site for prairie dogs would be more than compensated for by the mitigation measures to be implemented at Wild Pea Hollow. The fact that lethal trapping will not be used to remove Utah prairie dogs on the covered lands after the first 2 years of translocation does not affect this conclusion.

5.1.4 Wetlands

The proposed alternative would have no significant effect upon wetlands, because no wetlands occur in the project areas

5.1.5 Geology/Soils

5.1.5.1 Cedar Ridge Golf Course and Paiute Tribal Land

With the reduction or removal of Utah prairie dogs and their burrowing activities from the covered lands, less or no turn over and aeration of soils by burrowing activities would occur. This would pose no significant impacts on the geology or soils of the covered lands.

5.1.5.2 Wild Pea Hollow

As the Utah prairie dog colony at this site grows and expands, increased burrowing activity in existing and expanded areas would increase soil disturbance and aeration. This would improve soils and promote increased plant and invertebrate diversity.

5.1.6 Land Use

5.1.6.1 Cedar Ridge Golf Course and Paiute Tribal Land

Ongoing recreational and maintenance activities would likely continue at both the Golf Course and the Tribal Lands. The eventual reduction or elimination of Utah prairie dogs on these lands might increase the availability of functional lands for more recreational use and ease grounds maintenance.

5.1.6.2 Wild Pea Hollow

The conservation easement on Wild Pea Hollow under this alternative would preclude any potential development of the land that may have occurred when SITLA owned the property. Ongoing grazing, hunting, and vehicular use would continue under this alternative, but would be restricted to ensure conservation of the Utah prairie dog. These activities have been compatible with prairie dog conservation in the past and are not expected to change significantly under this alternative. Some grazing methods for Utah prairie dog habitat management may be adjusted to adapt to changed conditions. New land use activities at this site would include habitat restoration, habitat and population monitoring, and other activities to address changed circumstances, such as dusting for fleas, translocating prairie dogs, and trapping predators.

5.1.7 Air Quality

The proposed alternative would not result in any significant modifications of air quality at all three sites during and after the proposed action.

5.1.8 Water Resources

The proposed alternative would have no significant effect on any water resources at Wild Pea Hollow or Tribal land because none occur at these project sites. The pond at the golf course would not be affected by the proposed alternative because it is not part of Utah prairie dog habitat.

5.1.9 Cultural Resources

5.1.9.1 Cedar Ridge Golf Course and Paiute Tribal Land

The proposed alternative would have no significant effect upon any cultural resources because none exist on these lands.

5.1.9.2 Wild Pea Hollow

The Utah State Historic Preservation Office has determined that the proposed alternative would not result in adverse effects to the cultural resources on Wildlife Pea Hollow with stipulations to avoid the use of ground-disturbing equipment on the lithic sites (Appendix B). These lithic sites can be restored by hand-seeding. If any additional cultural or archaeological sites are discovered during construction, all work would halt until the site is evaluated by the Utah State Historic Preservation Office.

5.1.10 Human Health

There are two main potential disease agents that could impact Utah prairie dogs and could pose a threat to human health. These are Tularemia (*Francisella tularensis*) a native bacterium found throughout the United States, Sylvatic Plague (*Yersinia pestis*) a non-native bacterium found predominantly in the western United States. Both can be lethal to prairie dogs and can cause serious illness and death in humans if not treated. Humans contract plague and tularemia from fleas and other insects that carry the offending agent. Risk to humans in close proximity to prairie dog colonies is fairly low, although the risk increases with direct handling of animals. The primary measure for minimizing the chance of disease outbreaks is dusting with the insecticide, Deltamethrin, to kill fleas. It is also recommended to use insect repellent containing DEET on your skin, or treat clothing with repellent containing permethrin, to prevent insect bites (CDC 2008). Therefore the removal of Utah prairie dogs from the covered lands and translocation to other sites is not likely to affect the level of risk of transmission of plague to humans using these areas. Biologists handling Utah prairie dogs during live-trapping and translocation would minimize risk of exposure to fleas by using insect repellents and wearing appropriate protective clothing as well as dusting the trapped prairie dogs to kill fleas.

5.1.11 Cumulative Impacts

Cumulative impacts include the direct and indirect impacts of a project together with the reasonably foreseeable future actions of others. The Cedar Ridge Golf Course and the Paiute Tribal Lands are currently covered by the Iron County HCP as are all the private lands surrounding these lands. Under the Iron County HCP, impacts to Utah prairie dogs in Iron County are offset by conservation measures which include restoration of habitat on BLM lands and translocation of Utah prairie dogs off private lands.

In addition to the Iron County HCP, the Service has issued a section 4(d) rule under the Act for Utah prairie dogs, which was amended in 1991. The current rule authorizes controlled take of up to 6,000 animals annually on private agricultural lands between July 1 and December 31 throughout their range. Authorized take of Utah prairie dogs under the 4(d) rule is overseen and

permitted by UDWR and is based on spring counts and annual production of the colonies. A 10 year review of Certificates of Registration from 1997 through 2004 for agricultural land owners indicated that an average of 976 animals was taken annually range wide. Although future take under the 4(d) rule cannot be quantified, it is reasonable to assume that some amount would be authorized as needed to control nuisance animals. The take authorized by the 4(d) rule would benefit the conservation of the Utah prairie dog because it would contribute to relieving or preventing high population densities conducive to disease outbreaks. Furthermore, it would promote public tolerance of a species that many consider a pest. Take under the 4(d) would likely be compensatory mortality. In other words, the animals taken would likely have died from other causes before reproducing. The seasonal restrictions under the rule would target removal of young of the year which normally have high natural mortality.

In 2004 the Service issued a biological opinion to Indian Health Services for the construction of a ball field on Tribal Lands adjacent to the Golf Course. This biological opinion authorized the take of 1.31 acres of habitat and 33 animals through translocation. No other Federal projects are known at this time.

The additional impacts that would occur under the HCP in the proposed alternative when added to the impacts noted above will not preclude survival and recovery of the Utah prairie dog in the wild or significantly affect other elements of the human environment analyzed in this document.

5.2 Alternative 2 – On-site Mitigation

5.2.1 Vegetation

5.2.1.1 Cedar Ridge Golf Course and Paiute Tribal Land

Vegetation would remain unchanged at the Golf Course and the Tribal Lands under Alternative 2.

5.2.1.2 Wild Pea Hollow

Under this alternative, vegetation at Wild Pea Hollow would not be subject to habitat restoration. Cheatgrass and shrubs could increase and degrade Utah prairie dog habitat.

5.2.2 Wildlife

5.2.2.1 Cedar Ridge Golf Course and Paiute Tribal Land

Alternative 2 would not result in changes to the current status of wildlife on the Golf Course or Tribal Land.

5.2.2.2 Wild Pea Hollow

Although this alternative did not include protection in perpetuity or habitat restoration of Wild Pea Hollow, a conservation easement has been placed on the property and habitat restoration activities have occurred. Implementation of Alternative 2 would not affect the existence of the

conservation easement, and the protections it confers to wildlife as discussed in the analysis of Alternative 1 would apply here. Under Alternative 2, habitat restoration activities may not continue and benefits to wildlife species described in our analysis for Alternative 1 would not occur.

5.2.3 Endangered, Threatened, and Candidate Species

Except for the Utah prairie dog, none of the listed or candidate species or their potential habitat described in section 4.5 of this document are known to occur on any of the project lands involved with analyzed alternatives. Therefore, none of the activities proposed in this alternative are likely to affect these species.

Utah Prairie Dog

Implementation of Alternative 2 would provide permanent protection of about 10 acres of habitat for Utah prairie dog on the covered lands. However, because confining and protecting Utah prairie dogs on the roughs would be extremely difficult, the prairie dogs are likely to continue to use other areas of the golf course. Therefore, the status of the colony on the covered lands is likely to remain relatively unchanged under this alternative. Although this alternative would allow for the continued presence of some Utah prairie dogs within the golf course, this population still would not contribute to the long-term survival and recovery of the species as it will continue to be surrounded by development and isolated from other populations.

Although a conservation easement has been placed on Wild Pea Hollow and some habitat restoration has occurred, further conservation efforts for the species are not part of Alternative 2. Implementation of this alternative alone would not contribute to growth and expansion of the Utah prairie dog colony because it does not require habitat restoration or addressing other factors affecting the colony, such as plague and drought.

5.2.4 Wetlands

Alternative 2 would not significantly affect wetlands, because no wetlands occur in the project areas.

5.2.5 Geology/Soils

5.2.5.1 Cedar Ridge Golf Course and Paiute Tribal Land

Attempts to confine Utah prairie dogs to the roughs under this alternative may result in a higher density of the animal in these areas. Consequently, increased burrowing may result in more turn over and aeration of the soils on the 8 to 10 acres of the roughs. Conversely, if the applicants are successful in keeping Utah prairie dogs off the remaining golf course, burrowing would not occur to turn over and aerate soil. However, because Utah prairie dogs are likely to circumvent fencing, the effects to soils on the rest of the golf course will probably be similar to current conditions.

5.2.5.2 Wild Pea Hollow

Because Wild Pea Hollow is not part of Alternative 2, soil characteristics would be unchanged.

5.2.6 Land Use

5.2.6.1 Cedar Ridge Golf Course and Paiute Tribal Land

Current recreational and maintenance activities would likely continue at both the Golf Course and the Tribal Lands under Alternative 2. However, because confinement of Utah prairie dogs to just the roughs is not expected to be successful, such land use activities would continue to be hampered.

5.2.6.2 Wild Pea Hollow

Although this alternative did not include protection in perpetuity or habitat restoration of Wild Pea Hollow, a conservation easement has been placed on the property and habitat restoration activities have occurred. Implementation of Alternative 2 would not affect the existence of the conservation easement, and the conditions on land use discussed in the description and analysis of Alternative 1 would apply here. Under Alternative 2, habitat restoration activities may not continue and benefits to wildlife species described in our analysis for Alternative 1 would not occur.

5.2.7 Air Quality

Alternative 2 would not result in modifications of air quality at the Golf Course, Tribal Land or Wild Pea Hollow.

5.2.8 Water Resources

Alternative 2 would not result in modifications of water resources at the Golf Course, Tribal Land, or Wild Pea Hollow.

5.2.9 Cultural Resources

5.2.9.1 Cedar Ridge Golf Course and Paiute Tribal Land

Alternative 2 would have no significant effect upon any cultural resources because none exist on these lands.

5.2.9.2 Wild Pea Hollow

Preservation of cultural resources found on Wild Pea Hollow would be managed at the discretion of the Iron County as the current landowner. Because the conservation easement prevents land development, the cultural resources on site are unlikely to be affected.

5.2.10 Human Health

Under this alternative the number of prairie dogs on the covered lands would likely remain relatively high. However, as explained in section 5.1.10 Human Health above, humans

recreating and working in areas of Utah prairie dog colonies have a relatively low risk of contracting sylvatic plague or tularemia, unless they handle the animals and those risks can be minimized through the use of insecticides. Even with an increase in prairie dog numbers, the risk of contracting plague by humans using the area would remain low.

5.2.11 Cumulative Impacts

See discussion on other actions in the action area in the analysis of cumulative impacts for Alternative 1 under section 5.1.11 of this document.

The impacts that would occur under Alternative 2, when added to the impacts noted above will not preclude survival and recovery of the Utah prairie dog in the wild or significantly affect other elements of the human environment analyzed in this document.

5.3 Alternative 3 – No Action

5.3.1 Vegetation

5.3.1.1 Cedar Ridge Golf Course and Paiute Tribal Land

Vegetation would remain unchanged at the Golf Course and the Tribal Lands under Alternative 3.

5.3.1.2 Wild Pea Hollow

Under no-action alternative, vegetation at Wild Pea Hollow would not be subject to habitat restoration. Cheatgrass and shrubs could increase and degrade Utah prairie dog habitat.

5.3.2 Wildlife

5.3.2.1 Cedar Ridge Golf Course and Paiute Tribal Land

The no-action alternative would not result in changes to the current status of wildlife on the Golf Course or Tribal Land.

5.3.2.2 Wild Pea Hollow

Although this alternative did not include protection in perpetuity or habitat restoration of Wild Pea Hollow, a conservation easement has been placed on the property and habitat restoration activities have occurred. The no-action alternative would not affect the existence of the conservation easement, and the protections it confers to wildlife as discussed in the analysis of Alternative 1 would apply here. Under the no-action alternative, habitat restoration activities are not likely to continue and benefits to wildlife species described in our analysis for Alternative 1 would not occur.

5.3.3 Endangered, Threatened, and Candidate Species

Except for the Utah prairie dog, none of the listed or candidate species or their potential habitat described in section 4.5 of this document are known to occur on any of the project lands involved with analyzed alternatives. Therefore, the no-action alternative is not likely to affect these species.

Utah Prairie Dog

Under Alternative 3, Utah prairie dogs on the golf course and Tribal land could be live-trapped and translocated under the current Iron County HCP, but at a limited rate of 300 animals per year. Because recent data at the golf course show that prairie dog numbers continued to increase after the removal of 508 animals, the removal that would be allowed under the Iron County HCP would not likely adversely affect the colony at the golf course and Tribal land.

Although a conservation easement has been placed on Wild Pea Hollow and some habitat restoration has occurred, mitigation efforts for the species are not part of Alternative 3. The no-action alternative would not contribute to growth and expansion of the Utah prairie dog colony because it does not require habitat restoration or addressing other factors affecting the colony, such as plague and drought.

5.3.4 Wetlands

Alternative 3 would not significantly affect wetlands, because no wetlands occur in the project areas.

5.3.5 Geology/Soils

5.3.5.1 Soil characteristics would remain unchanged on all project areas under Alternative 3.

5.3.6 Land Use

5.3.6.1 Cedar Ridge Golf Course and Paiute Tribal Land

Current recreational and maintenance activities would likely continue at both the Golf Course and the Tribal Lands under Alternative 3. However, because Utah prairie dogs would continue to occur on these lands, such land use activities would continue to be hampered.

5.3.6.2 Wild Pea Hollow

Although this alternative did not include protection in perpetuity or habitat restoration of Wild Pea Hollow, a conservation easement has been placed on the property and habitat restoration activities have occurred. The no-action alternative would not affect the existence of the conservation easement, and the conditions on land use discussed in the description and analysis of Alternative 1 would apply here. Under the no-action alternative, habitat restoration activities are not likely to continue.

5.3.7 Air Quality

Alternative 3 would not result in modifications of air quality at the Golf Course, the Tribal Lands or Wild Pea Hollow.

5.3.8 Water Resources

Alternative 3 would not result in modifications of water resources at the Golf Course, the Tribal Lands, or Wild Pea Hollow.

5.3.9 Cultural Resources

5.3.9.1 Cedar Ridge Golf Course and Paiute Tribal Land

Alternative 3 would have no significant effect upon any cultural resources because none exist on these lands.

5.3.9.2 Wild Pea Hollow

Preservation of cultural resources found on Wild Pea Hollow would be managed at the discretion of the Iron County as the current landowner. Because the conservation easement prevents land development, the cultural resources on site are unlikely to be affected under the no-action alternative.

5.3.10 Human Health

Under no-action alternative the number of prairie dogs on the covered lands would likely remain relatively high. However, as explained in section 5.1.10 Human Health above, humans recreating and working in areas of Utah prairie dog colonies have a relatively low risk of contracting sylvatic plague, unless they handle the animals and those risks can be minimized through the use of insecticides. Even with an increase in prairie dog numbers, the risk of contracting plague by humans using the area would remain low.

5.3.11 Cumulative Impacts

See discussion on other actions in the action area in the analysis of cumulative impacts for Alternative 1 under section 5.1.11 of this document.

The impacts that would occur under the no-action alternative, when added to the impacts noted above will not preclude survival and recovery of the Utah prairie dog in the wild or significantly affect other elements of the human environment analyzed in this document.

5.4 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629 (1994), directs Federal agencies to incorporate environmental justice in their decision making processes. Federal agencies are directed to identify and address, as appropriate, any disproportionately high and adverse

environmental effects of their programs, policies, and activities on minority or low-income populations. This assessment has not identified any adverse or beneficial effects unique to minority or low-income populations in the affected areas.

6 CONSULTATION AND COORDINATION WITH OTHERS

6.1 Consultation with Local interests

Throughout the project, the Service has coordinated with the applicants and Iron County in their preparation of the HCP. Notice of Availability of the HCP and the accompanying draft EA was published in the *Federal Register* by the Service on May 15, 2006 for a 30-day public comment period. The Service reviewed all submitted comments and addressed substantive issues and incorporated any new information into the final EA and FONSI.

6.2 Coordination with State Interests

The Service coordinated with UDWR throughout the development of this HCP and for the preparation of the EA and supplemental EA. The successful development and implementation of this HCP is dependent on participation with UDWR. UDWR is signatory to the Implementation Agreement and would participate in the implementation.

The Service coordinated with SITLA to identify lands that support Utah prairie dog habitat and possessed opportunities for additional habitat through restoration.

6.3 Coordination with Federal Interests

The Service coordinated with BLM throughout the development of the project and for the preparation of the EA and supplemental EA. The BLM conducted initial biological surveys and vegetation surveys utilized in the development of the HCP. As the adjacent landowner to the Wild Pea Hollow, participation of BLM in the development and implementation of the HCP was imperative. BLM is signatory to the Implementation Agreement and would participate in implementation and long term management of Wild Pea Hollow. The Service also coordinated with the U.S. Forest Service regarding preparation and management of translocation sites.

6.4 Consultation with Tribal Interests

The Tribe is a co-applicant with Cedar City to this HCP and was included in coordination for development of the project. The Tribe has participated in the development of the HCP and is signatory to the Implementation Agreement.

6.5 Consultation with the U.S. Fish and Wildlife Service

The Service submitted a copy of the EA, HCP, and 10(a)(1)(B) permit to the Utah Ecological Services Field Office, and asked for their review and concurrence that the project is not likely to adversely affect Utah prairie dog and no effect for Southwestern willow flycatcher, Mexican spotted owl, California condor, and bald eagle.

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APPENDIX A. Habitat Conservation Plan for the Cedar Ridge Golf Course and Paiute Tribal Lands

APPENDIX B. Correspondence Regarding Historic and Cultural Resources in the Project Area