United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

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In Reply Refer To
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Memorandum

To: Utah State Conservationist, Natural Resources Conservation Service, Salt Lake City, Utah 84138

Assistant Region Director, Region 6, U. S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver Colorado 80225

From: Utah Field Supervisor, Ecological Services, U.S. Fish and Wildlife Service, West Valley, Utah 84119

Subject: Intra-agency Formal Section 7 Consultation with the U.S. Fish and Wildlife for the Proposed Programmatic Safe Harbor Agreement for the Utah Prairie Dog in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne Counties, Utah

This biological opinion was prepared by the U.S. Fish and Wildlife Service (Service), Utah Field Office, as required by the Endangered Species Act of 1973 (Act), as amended, for proposed issuance of a section 10(a)(1)(A) permit for the Utah prairie dog (*Cynomys parvidens*) associated with the implementation of a programmatic Safe Harbor Agreement within Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties, Utah. This programmatic Safe Harbor Agreement is between the Panoramaland Resource Conservation and Development Council, Inc. (Program Administrator) and the U.S. Department of Interior, Fish and Wildlife Service (Service/USFWS); hereinafter collectively called the "Parties." The Natural Resources Conservation Service (NRCS) and is a funding partner assisting with the implementation of the conservation measures outlined in the Safe Harbor Agreements. The Federal action constituting a section 7 nexus under the Act is issuance of a section 10(a)(1)(A) permit by the Service and the use of federal funds through NRCS programs for implementation of conservation measures. This biological opinion has been prepared by the Service in accordance with section 7 of the Act (16 USC 1531, *et seq.*) and Interagency Cooperation Regulations (50 CFR 402).

The Service has determined that the proposed action "may affect, but is not likely to adversely affect" the Autumn buttercup (*Ranunculus aestivalis*) because although this plant has been

known to occur within the range of the Utah prairie dog, they are unlikely to occur in the same areas due to differences in soil moisture preferences. The Service has also determined that the proposed action will no effect on the California condor (*Gymnogyps californianus*) because the species is not likely to roost or nest within suitable habitat for Utah prairie dogs. Additionally, the Service has determined that the proposed action will have "no effect" on other listed or candidate species in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties because these species do not occur within the project areas. No further analysis of impacts to these species is included in this biological opinion.

The Utah prairie dog is federally listed as a threatened species and occurs within Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties, Utah. This biological opinion addresses impacts of a programmatic Safe Harbor Agreement to this species and was prepared using information contained in the Safe Harbor Agreement application package prepared by the Program Administrator. Additional information was obtained from existing Service files and communications among Service employees and representatives from the Utah Division of Wildlife Resources. A complete administrative record of this consultation is on file at the Utah Field Office.

Consultation History

On June 1, 2007, the Utah Field Office received a draft programmatic Safe Harbor Agreement between the U. S. Fish and Wildlife Service (Service) and the Panoramaland Resource Conservation and Development Council, Inc. (Program Administrator). On September 6, 2007 the Service published the Notice of Availability in the Federal Register. The public comment period closed on October 9, 2007. In response to public comment, the Service and the NRCS prepared an Environmental Assessment which was completed in June 2008. The Environmental Assessment was available for public comment from June 20, 2008 through July 3, 2008. The public comment period was extended to July 25, 2008 to accept all comments. The Service responded to comments in the Finding of No Significant Impacts.

BIOLOGICAL OPINION

Description of Proposed Action

The proposed action is the issuance of a 10(a)(1)(A) permit in conjunction with the implementation of a programmatic Safe Harbor Agreement (Agreement) within Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties, Utah and consists generally of those lands within the historic range of the Utah prairie dog. The Safe Harbor Agreement and all associated exhibits are found as Attachment 1 for reference. The properties eligible for enrollment under this Agreement consist of non-Federal agricultural lands in the aforementioned counties, which are hereafter made subject to Cooperative Agreements between the owners or managers thereof (Cooperators) and the Program Administrator (Exhibit 1 of the attached SHA). Enrollment under this Agreement is voluntary. The enrolled properties are to be more precisely indicated on maps attached to each Cooperative Agreement.

Current and recent land use practices on the enrolled properties are varied and include grazing, crop production, and other agricultural uses, as well as recreational uses. The conservation

measures for Utah prairie dogs that will occur on the "enrolled properties" are expected to create a net benefit for the species. A full description of the specific proposed actions will be found in the Cooperative Agreements for each landowner and will include conservation measures identified in Exhibit 2 of the attached Safe Harbor Agreement and described below. Each Cooperative Agreement shall be reviewed by the Service prior to signing by either party to ensure that the agreement will provide a net conservation benefit to the Utah prairie dogs. The Cooperative Agreements shall be effective upon the signing thereof by the Cooperator and the Program Administrator. The Utah prairie dog (*Cynomys parvidens*) is the only "covered species" as defined in the Service's final Safe Harbor Policy (64 Federal Register 32717).

The Safe Harbor Agreement becomes effective upon issuance by the Service of the Section 10(a)(1)(A) enhancement of survival permit (Permit) described in the Safe Harbor Agreement, and will be in effect for a term of 35 years. Cooperative Agreements developed pursuant to the Safe Harbor Agreement will be for a term of at least 15 years. Certificates of Inclusion issued under this permit will have a term of 10 years beyond the term of the Cooperative Agreement but in no event beyond 2044. This Safe Harbor Agreement and the Permit may each be extended by mutual written consent of the parties given prior to the date of expiration and in compliance with all applicable laws and regulations. The additional years of Permit duration in the Certificates of Inclusion beyond the term of the Cooperative Agreements is approximately the amount of time that the Cooperators' conservation measures are expected to benefit the Utah prairie dog without further active management. This additional time will allow the Cooperators to continue routine ranching and farming operations without actively managing habitat for the covered species.

Enrolled Property Baseline Determinations

For each enrolled property, the baseline conditions shall be based upon a survey of the enrolled property. Baseline surveys will be undertaken by a qualified person satisfactory to the Service and according to Service approved protocol. Baseline surveys may not occur more than 12 months prior to the signing of the Cooperative Agreement. These surveys will delineate the location and acreage of all occupied Utah prairie dog habitat and conduct a count of adult Utah prairie dogs present. In order to receive the assurances regarding take of covered species specified in Section 11 of the programmatic Safe Harbor Agreement, a Cooperator must maintain at least as many acres of occupied habitat and adult animals as were present on the enrolled property when the Cooperator entered into the program.

The conservation measures included in each Cooperative Agreement are described below.

Standard Activities

The following management activities shall be included in all cooperative agreements:

- Limit the use of pesticides and herbicides within 100 feet of active prairie dog burrows to those included on a list of Service-approved chemicals.
- Avoid the use of heavy equipment in occupied prairie dog habitat during sensitive life stages such as breeding and nursing.

- All practices will be planned and applied in a manner that will avoid or minimize adverse effects to sensitive, threatened or endangered species.
- Monitor habitat restoration activities to assess the general condition of habitat, use of the habitat by the covered species, progress of the ongoing management activities, and satisfaction of the Cooperator with the project, and adjust practices as deemed necessary.

At least two of the following management activities shall be included in all cooperative agreements except as approved by the Service:

- Prescribed grazing to increase visual surveillance, increase forage quantity and quality, and deferment or rest to create vegetative barriers to limit expansion to undesirable locations, and/or
- Brush management to restore plant community balance, increase visual surveillance, and increase forage quantity and quality, and/or
- Seeding to restore degraded rangelands or pasturelands and bare ground, and increase forage quantity and quality, and/or,
- Prescribed burning to increase forage quantity and quality, and/or,
- Noxious weed control to facilitate restoration of rangelands or pasturelands, increase visual surveillance, and increase forage quantity and quality.

Additional Activities

A Cooperator may elect to include one or more of the following management activities in a Cooperative agreement:

- Irrigation improvements and control to reduce the chance of burrow flooding, and increase forage quantity and quality, increase access to moist vegetation,
- Plant vegetative barriers, such as, windbreaks, shelterbelts, or rows of tall grasses and shrubs to manage dispersal of prairie dogs into sensitive areas identified in the Cooperative Agreement, thereby minimizing the need for future control of prairie dogs.
- Dust burrows for fleas using pesticides and techniques approved by the Utah Prairie Dog Recovery Team, to prevent the spread of plague, or other diseases.
- Artificial burrow preparation and translocation of live Utah prairie dogs to establish a new colony in suitable habitat.
- Any other conservation measure that provides a net conservation benefit to the species as approved by the Service.

In association with implementing the conservation measures defined in the Cooperative Agreements, take is authorized by a 10(a)(1)(A) enhancement of survival permit as part of the proposed action. The associated Certificates of Inclusion with this Permit will remain in effect for at least 25 years per Cooperator (10 years beyond the term of the Cooperative Agreement), but not beyond 2044.

Incidental Take

A Cooperator's activities may result in some incidental take of Utah prairie dogs while engaging in normal agricultural activities such as grazing, ranching, and farming. This incidental take will not affect the net conservation benefits provided by this Agreement. Incidental take will be avoided and minimized through the following:

- In occupied Utah prairie dog habitat, deep tilling (greater the 18 inches) will be avoided. If it cannot be avoided, it will occur when adults and pups are above ground and can avoid impacts of equipment.
- The use of heavy equipment in occupied habitat will be avoided during breeding and nursing seasons.

Control

Due to management activities, a Cooperator may experience increases in Utah prairie dog populations that could detrimentally impact the participant's ongoing ranching and farming activities. Thus, control measures may be authorized in a Cooperative Agreement if total adult prairie dogs on the enrolled property exceed a specified number, which shall be no less than 20 adults (as determined by the previous spring count) or twice the baseline number (whichever is larger). In addition to a cap on numbers, areas within the enrolled property may be identified as areas of control where animals could detrimentally impact the participants' ongoing ranching and farming activities, or where they could detrimentally impact structures (i.e., within 50 feet of a house or barn). Such control will be in accordance with the restrictions and procedures specified in the Safe Harbor Agreement. These areas must be clearly identified as part of the Cooperative Agreement. Control will be authorized through the following:

- Issuance of a Certificate of Registration through the Utah Division of Wildlife Resources.

The Safe Harbor Agreement will be managed by the Program Administrator with oversite provided by the Service. The responsibilities of the Program Administrator are as follows:

- Conduct outreach and provide information pertaining to this Utah Prairie Dog Safe Harbor program to private landowners who may be interested in enrolling in the program.
- Work with potential participants to identify appropriate management activities for the enrolled property to be included and detailed as part of the Cooperative Agreement.
- Coordinate with the Service to conduct Baseline Determinations as defined in Attachment 2 of this document.
- Provide copies of all Cooperative Agreements to the Service for review and approval prior to signing.
- Inform the Service within 30 days of any notification it receives from a Cooperator (or from a neighboring landowner who has entered into an agreement pursuant to Section 9 hereof) of the latter's intent to make a change in land use likely to reduce the acreage of occupied Utah prairie dog habitat or living individuals, and to coordinate with the Service in the event that it

chooses to relocate such potentially affected individuals of the covered species in response to such notification.

- Annually, in cooperation with the Service and Utah Division of Wildlife Resources (UDWR), carry out surveys of the restored habitat on enrolled properties to assess the general condition of habitat, use of the habitat by the covered species, progress of the ongoing management activities, any incidental take or control that occurred or may have occurred, and satisfaction of the Cooperator with the project. Such surveying activities may be carried out on the Program Administrator's behalf by a qualified entity pursuant to an agreement with the Program Administrator and Cooperator.
- Provide the Service with an annual report, due by March 1 of each year, in the form attached hereto as Attachment 3.
- Furnish the Service with copies of all Cooperative Agreements hereunder within 2 weeks after they are signed.

Status of the Species

There are five species of prairie dogs, all of which are native to North America, and all of which have non-overlapping geographic ranges (Hoogland 2003). Taxonomically, prairie dogs (*Cynomys spp.*) are divided into two subgenera: The white-tail and black-tail. The Utah prairie dog (*C. parvidens*) is a member of the white-tail group, subgenus *Leucocrossuromys*. Other members of this group, which also occur in Utah, are the white-tailed prairie dog (*C. leucurus*) and the Gunnison prairie dog (*C. gunnisoni*).The Utah prairie dog is most closely related to the white-tailed prairie dog and chromosomal and biochemical data suggest that these two species may once have belonged to a single interbreeding species (Pizzimenti 1975). The two species are now separated by ecological physiographic barriers. Both Chesser (1984) and Ritchie and Brown (2005) found that genetic variance within the Utah prairie dog population to be very low, less than half commonly observed in black-tailed prairie dogs (*C. ludovicianus*). Preserving the genetic variance is important to the conservation and recovery of the species (USFWS 1991). The Utah prairie dog is the westernmost member of the genus *Cynomys*. The species range, 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 within 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 1920's (Turner 1979).

By the 1960's, distribution of the Utah prairie dog was greatly reduced due to a non-native disease (sylvatic plague), 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 animals in 1982, the UDWR petitioned the Service to remove the Utah prairie dog from the U.S. List of Endangered and Threatened Wildlife. Upon reviewing all pertinent biological data, the Service determined that the Utah prairie dog was not currently in danger of extinction and published the Final Rule reclassifying the species to threatened and establishing the special rule on May 29, 1984 (49 FR 22330). The special rule allowed "take" of 5,000 animals annually between June 1 and December 31 on agricultural lands in Cedar and Parowan Valleys in Iron County. 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 5000 to 6000 animals annually (USFWS 1991b). In February, 2007, the Service found that a petition to reclassify the Utah prairie dog from threatened 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. However, as prairie dogs are burrowing animals, it is very difficult to obtain precise population numbers. Many factors influence the amount of time an individual prairie dog spends above ground including temperature, wind and the presence of predators such as hawks flying overhead. In addition, the terrain and vegetation can make it difficult to see prairie dogs. Annual counts most likely underestimate the total number of adult animals as only 40 to 60 percent of individual prairie dogs are above ground at any one time (Crocker-Bedford 1975). The literature also suggest 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 (Pizzimenti and Collier 1975, Wright-Smith 1978, Mackley et al. 1988, Hoogland 2001).

The annual spring counts 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 twenty years (McDonald 1993). Rangewide adult counts have been as high as 7,400 in the 1989 spring census count (Coffeen 1989) with a low count of 3,500 animals in 1992, largely due to climatic and disease factors (McDonald 1993). Recent adult numbers continue to exhibit fluctuating trends. Rangewide spring above ground counts of adult Utah prairie dogs conducted by the UDWR in the past five years (2003 – 2007) are 3829, 4102, 5375, 5524, 5441 respectively (UDWR unpublished data 2007.). Rangewide adult spring counts for 2008 have not yet been reported.

In 1972, the UDWR began mapping occupied Utah prairie dog habitat throughout their range. Originally maps were created by biologists who identified the colony location on a map. As new colonies were found, each one was mapped. As stated above, each spring all mapped colonies are surveyed for adult prairie dogs. If a colony expands its position on the landscape, the habitat maps are updated to reflect the expansion. If spring surveys count adult prairie dogs at the

mapped colony, it is referred to as occupied habitat. If the spring surveys do not count adult dogs it is referred to it as unoccupied habitat. Any habitat that has been occupied at any time since 1972 is referred to as "mapped habitat" and may or may not currently support prairie dogs. Occupied habitat can fluctuate greatly from year to year as prairie dog colonies contract and expand in response to available resources, predators and disease outbreaks. Occupied habitat is not mapped every year as it varies greatly. In 2007 the Utah Prairie Dog Recovery Team initiated a range-wide mapping effort to actively look for new unmapped colonies and update the range maps for the species. The 2007 efforts focused on the Awapa Recovery Area and 2008 efforts are currently underway on the Paunsaugunt Recovery area. The West Desert Recovery Area will be mapped in 2009. As of 2007, there are 8034 acres of occupied habitat and over 12,000 acres of mapped habitat in the West Desert Recovery Area. The Paunsaugunt has approximately 8696 acres of occupied habitat and 15,292 acres of mapped habitat. The Awapa Recovery Area has approximately 4,135 acres of occupied habitat and 10,777 acres of mapped habitat.

Life History

Utah prairie dogs are true hibernators and spend four to six months annually under ground (Hoogland 2001). They emerge in the spring to begin breeding which begins in mid-March to mid-April depending on elevation. Generally, females give birth to one litter per year, with an average of four 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 five to seven weeks of age, are full grown by October of their first year and reach sexual maturity at one year. Less the 50% of both males and females survive the first year (Hoogland 2001). Only about 20 percent of females and less then 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). Dispersal distances average 0.33 miles per migration event (Mackley 1988). However recent observations of marked animals have shown translocated prairie dogs moving three kilometers within five weeks. Low survivorship severely limits prairie dog reproduction (Hoogland 2001). Utah prairie dogs rarely live beyond 5 years (Hoogland 2001). Due to their limited reproductive rates, short life span and high mortality rates, numbers of individuals within a colony can fluctuate greatly throughout the year with low points in the spring and peaks in the late summer when both adults and pups are above ground.

Utah prairie dogs are found in elevation from 5400 feet on the valley floors up to 9500 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 persist in seeded areas. Vegetation must be short 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 species dominate, 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 can greatly impact translocation sites where an established social system or burrow system is not yet present.

Utah prairie dog populations are highly susceptible to sylvatic plague (*Yersinia pestis*), a bacterium introduced to the North American continent in the late 1800's (Cully 1993). We have limited understanding of the variables that determine when sylvatic plague will impact prairie dog populations. 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.

Recovery Efforts

The primary objective of the 1991 Utah prairie dog Recovery Plan is to reestablish Utah prairie dog populations on public lands and to maintain the genetic diversity (U.S. Fish and Wildlife Service 1991) to 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, over 19,561 Utah prairie dogs were translocated to public land sites (Bonzo 2003). Although initial survival has been 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. Despite these efforts to establish new Utah prairie dog colonies and supplementing existing ones on federal lands, approximately 67% of Utah prairie dogs still occur on private and other non-federal lands (UDWR unpublished data 2007). Efforts are now underway to encourage the conservation of existing colonies on private lands.

In 1994, the Recovery Implementation Team (RIT) was formed, due in large part to the cooperative efforts of federal and state agencies. 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. 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.

In 2006 a 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 the U.S Forest Service, U.S. Park Service, Natural Resource Conservation Service, U.S. Bureau of Land Management, Environmental Defense Fund, Farm Bureau, Utah Division of Wildlife Resources, and Utah State University. It is anticipated that a draft revised recovery plan will be out for public comment in 2009. All Recovery Team members are involved in efforts to conserve and recover the Utah prairie dog using the best available information and adaptive management practices.

Environmental Baseline

This programmatic Safe Harbor Agreement falls within the entire range of Utah prairie dogs on all non-Federal lands in Beaver, Garfield, Iron, Kane, Piute, Sevier, and Wayne counties, and therefore is within all three Recovery Areas for the species.

The Awapa Plateau Recovery Area contains approximately 10% of all Utah prairie dogs (UDWR unpublished data 2007), with roughly 59% of the individuals on public lands. Five hundred sixty one dogs were counted in 2007, which is 10% of the total 2007 rangewide spring count of 5,441 dogs. This area has been experiencing an overall upward trend since 1990. From 1990 through 2005, spring counts on all private and public lands increased from 367 to 593 prairie dogs (UDWR unpublished data 2007).

The Paunsaugunt Recovery Area contains 20% of all Utah prairie dogs (UDWR unpublished data 2007), with roughly 38% of the individuals on public lands. One thousand one hundred and sixty one dogs were counted in 2007, which is 21% of the total 2007 rangewide spring count of 5,441 dogs. This area has experienced an overall downward trend since 1993; i.e., from 1993 through 2004 total spring counts decreased from 2,072 to 717 prairie dogs (UDWR unpublished data 2007). Trends appear to be going back up with 2007 counts at 1,161 animals.

Surveys conducted in 2007 in the West Desert Recovery Area indicate that the area contains approximately 68% of all Utah prairie dogs (UDWR unpublished data 2007), with roughly 13% on public and protected lands. Three thousand seven hundred and nineteen dogs were counted in 2007, which is 68% of the total 2007 spring count of 5,441 dogs. Since 1976, the West Desert population has vacillated between < 1,000 and 4,750 Utah prairie dogs. There have been three significant peaks – in 1982, 1989, and 2000 – when the population was greater than 4,000 adults.

Factors Affecting Species within the Action Area

Since 1995, 7 permits have been issued under section 10(a)(1)(B) of the ESA within the West Desert Recovery Area, the largest being the Iron County Habitat Conservation Plan (HCP). The Iron County HCP, Cedar City Golf Course HCP, and Connel Gower HCP remain active. The Iron County HCP authorizes take on an annual basis, calculated as 10% of the 5-year average of prairie dog counts on federal and protected lands; for 2008, the Iron County HCP authorized the permanent take of 77 prairie dogs. This represents the typical amount of annual take associated with the Iron County HCP. Any increases to this amount of take would be the result of increased populations of prairie dogs on federal and protected lands. The Cedar City Golf Course HCP authorizes the take, through translocations, of up to 800 Utah prairie dogs annually. The Connel Gower HCP authorizes the take of 63 acres of Utah prairie dog habitat, and up to 106 Utah prairie dogs by translocation. Since 1990, 24 formal consultations under section 7 of the ESA have been initiated resulting in the loss of approximately 189 acres of habitat and 323 animals, which is an average take of approximately 18 animals per year. We anticipate that the potential level of take authorized in the future is not likely to significantly vary from these averages because anticipated federal activities are unlikely to change substantially from current and past activity types and levels and any increased private development would be covered under the Iron County HCP.

In 1984, the Service issued a section 4(d) rule for Utah prairie dogs, which was amended in 1991. The current rule authorizes control 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 the UDWR via Certificates of Registration, and is based on spring counts and annual production of the colony. 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 the amount of future take under the 4(d) rule is difficult to precisely predict, it is reasonable to assume that a similar amount of annual take as in the past (976 animals) would be authorized in a given year as needed to control animals causing damage on agricultural lands, because agricultural activities in the area are not expected to expand.

Effects of the Action

The objectives of this Agreement are (1) to promote the conservation of Utah prairie dogs through the voluntary restoration, enhancement, and management of farm and ranchlands in southwestern Utah, (2) to provide certain regulatory assurances to landowners participating in such restoration, enhancement, and management activities, and (3) to accomplish the foregoing without negatively affecting farming activities. The proposed action will have both positive and negative effects to Utah prairie dogs but the overall results are expected to provide a net conservation benefit to the species.

Positive effects to the Utah prairie dog will result from the improvement and possible expansion of available habitat through managed grazing and seeding. This net benefit to the species is based on available research and literature that indicates that overgrazing by livestock may result in a vegetation shift from grass to shrub forage, weed infestations, and erosion, leading to lower quality Utah prairie dog habitat and/or potential removal/destruction of prairie dog colonies. However, certain grazing regimes, such as rotational grazing may provide beneficial impacts such as improvements to forage quality and positive changes in vegetative composition. For example, studies conducted on the effects of grazing and habitat quality on Utah prairie dogs (Ritchie and Cheng 2001) have shown strong associations between grazing season and prairie dog weight gain and reproduction. Adult weight gain was three times lower in complexes where grazing occurred in the summer than in complexes where grazing occurred in spring or fall/winter (Ritchie and Cheng 2001). The juvenile:adult ratio was significantly higher in complexes where grazing occurred in fall/winter than when grazing occurred in either spring or summer. The results suggested that prairie dog population growth is food limited. Food reduction also elicited less vigilant behavior in individual prairie dogs, which increased the predation risk (Ritchie and Cheng 2001). Decreased weight gain by prairie dogs can result in decreased fitness and overwinter survival. Utah prairie dog population crashes are more frequent in habitats with low plant diversity, caused by overgrazing and complexes repeatedly affected by plague (Ritchie 1999).

Based on the aforementioned research, the proposed action emphasizes incorporation of prescribed grazing plans, brush management, seeding, and noxious weed control as Standard Activities in all Cooperative Agreements, thus improving habitat conditions for Utah prairie dogs on enrolled properties. The proposed habitat treatments will improve available habitat by decreasing shrub cover and increasing grasses and forbs available for prairie dogs. Long term

benefits of this project include a reduced risk of catastrophic decline by increasing the size of Utah prairie dog colonies and increasing plant diversity, forage availability, and surveillance habitat throughout the range of Utah prairie dogs. New prairie dog colonies may be established on previously unoccupied sites which will expand the species occupied habitat and improve dispersal abilities.

In addition to direct habitat improvements, species' conservation will be enhanced through the partnerships established with individual landowners through implementation of the proposed action. Approximately 70% of all Utah prairie dogs occur on private lands rangewide. Private landowners are under no regulatory obligation to improve habitat conditions for the Utah prairie dog. In fact, many landowners fear that the presence of a threatened or endangered species could restrict what they can do with their land (Environmental Defense, 2008) . As a result, they may manage their property to discourage the presence of the Utah prairie dog. Encouraging voluntary conservation efforts by private landowners should result in improved habitat conditions and potentially increased colony size and distribution rangewide. Although it is not possible to predict the exact acreage or distribution of future enrolled properties, even the initial enrollment of only a few landowners creates an educational foundation and public outreach regarding the conservation and recovery of the Utah prairie dog.

A Cooperator's activities may result in some incidental take of Utah prairie dogs while engaging in normal agricultural activities such as grazing, ranching, and farming. In addition, incidental take may occur during implementation of conservation measures to improve habitats under this proposed action; for example, prairie dogs could be killed by vehicles during implementation of restoration activities.

Some control of prairie dogs is also authorized by this proposed action. Due to implementation of habitat improvements, a Cooperator may experience increases in Utah prairie dog populations that could detrimentally impact the participant's ongoing ranching and farming activities. In accordance with issuance of this Permit, control measures may be authorized in a Cooperative Agreement if total adult Utah prairie dogs on the enrolled property exceed a specified number, which shall be no less than 20 adults (as determined by the previous spring count) or twice the baseline number (whichever is larger). Areas of allowed control will be specifically identified on the enrolled properties. These areas of allowed control will be restricted to areas where prairie dogs could detrimentally impact the participant's ongoing ranching and farming activities, or where they detrimentally impact structures (i.e., within 50 feet of a house or structure). Control of Utah prairie dogs will not occur until translocation of the animals has been considered or undertaken by the UDWR or Service.

Implementation of the proposed action enrolls property owners in Cooperative Agreements to manage habitat for the conservation of the Utah prairie dog for a period of 15 years. The Cooperator has the right to return his property to "baseline" conditions after the term of the Cooperative Agreement. Generally, a landowner who would allow his property to return to baseline would do so by no longer carrying out habitat management measures and is not likely to do so through take of prairie dogs. However, in the worst case scenario, return to baseline conditions would result in reduction in habitat quality from the improved conditions and prairie

dog numbers resulting from the Cooperative Agreement, but would not result in a net loss below baseline conditions.

Evaluating the sum of negative and positive effects associated with the proposed action provides conclusions regarding the ability of the action to provide a net conservation benefit for the Utah prairie dog. The net conservation benefit is defined as "the cumulative benefits of management actions which provide for an increase in species' population and/or enhancement, restoration, or maintenance of the covered species' habitat."

The long term effects of this programmatic Agreement will result in a net conservation benefit for the Utah prairie dog that contributes to the species' recovery, and outweighs any negative effects associated with incidental take and control activities. This conclusion is based on the following assessment:

- Conservation benefits for Utah prairie dogs from implementation of this programmatic Safe Harbor Agreement includes--(1) increased availability of forage (forage quantity and quality) and visual surveillance habitat for Utah prairie dogs, (2) potential for increased Utah prairie dog numbers and colonies on "enrolled properties" and overall across all three Recovery Areas, (3) reduced risk of catastrophic decline due to increased Utah prairie dog numbers and high plant diversity on colony sites, (4) improved chance of natural restocking following catastrophic declines without increasing the risk of plague through an increased number of distinct colonies and reduced inter-colony distance, and (5) increased genetic mixing within each Recovery Area following natural dispersal.

- Conservation of Utah prairie dogs will be enhanced by improving and encouraging cooperative management partnerships with private landowners, who are willing to establish a model for others to follow. Thus, there is a potential to increase prairie dog habitat quality and quantity across the species range long-term, through education and partnerships with private landowners.

- Incidental take and control of Utah prairie dogs is avoided and minimized through application of strict measures included in each Cooperative Agreement, including limits on the use of construction equipment in occupied prairie dog habitat, limits on deep tilling activities, identification of specific allowed control areas on each enrolled property, and limits on the number of animals that can be controlled on an annual basis.

- Incidental take and control may only occur where prairie dogs have increased beyond their baseline, as described in the Safe Harbor Agreement. In order to receive the assurances regarding take of covered species specified in Section 11 of the Programmatic Safe Harbor Agreement, a Cooperator must maintain at least as many acres of occupied habitat and adult animals as were present on the enrolled property when the Cooperator entered into the program.

In conclusion, while some incidental take and control of Utah prairie dogs may be associated with the proposed actions, there are sufficient measures in place to ensure that take is minimized and avoided to the extent feasible and will only occur where colonies have increased beyond

their baseline. In contrast, this program has the opportunity to substantially increase habitat conservation and recovery options for the Utah prairie dog through a coordinated effort to educate and partner with private landowners, who comprise ownership and management of 70% of the species habitat rangewide. Implementation of the proposed action will thus result in a net conservation benefit to the Utah prairie dog and will contribute to the enhancement and survival of the species.

Cumulative Effects

Cumulative effects include the effects of future State, tribal or private actions that are reasonably certain to occur in the action areas considered in this biological opinion. Future Federal actions that are unrelated to the proposed actions are not considered in this section because they require separate consultation pursuant to section 7 of ESA.

Under the proposed action, the "enrolled properties" will continue to support ongoing grazing and farming activities. In addition, private, State, and tribal lands across the species range will continue to support activities such as grazing, human population expansion and associated infrastructure (increased roads); oil and gas exploration; research; and recreation activities (e.g. off-highway vehicles). These activities will continue to cumulatively affect Utah prairie dog population persistence by contributing to loss and fragmentation of small, isolated colonies. Control of Utah prairie dogs on private agricultural lands may also be authorized through issuance of a Certificate of Registration through the Utah Division of Wildlife Resources. However, the proposed action the issuance of a Programmatic Safe Harbor Agreement and 10(a)(1)(A) permit would improve conditions for the Utah prairie dog on enrolled properties (as previously described in the Effects of the Action section), and provide a net conservation benefit rangewide, that would not exist absent the Programmatic Agreement. Therefore, the proposed alternative, when considered with other reasonably foreseeable future activities, would not result in significant cumulative adverse effects to the Utah prairie dog.

Conclusion

After reviewing the current status of the Utah prairie dog, the environmental baseline, the effects of the proposed action, and the cumulative effects, it is the Service's opinion that the action as proposed is not likely to jeopardize the continued existence of the Utah prairie dog. No critical habitat has been designated for the Utah prairie dog. The Service has reached this conclusion based on the following reasons:

1) The proposed project will have a net conservation benefit to the Utah prairie dog by improving and increasing available habitat and it will contribute to the enhancement and survival of the species.

2) The proposed project may expand established colonies currently located on private lands and promote their existence for a minimum of 15 years per individual Cooperative Agreement.

3) In no event shall control be authorized under cooperative agreements that will take the prairie dog numbers below the baseline.

4) If the "enrolled properties" are returned to baseline conditions, they will maintain baseline prairie dog colonies.

INCIDENTAL TAKE AUTHORIZATION

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Agencies associated with this consultation so that they become binding conditions of any grant or permit issued to these Agencies, as appropriate, for the exemption in Section 7(o)(2) to apply. The Service has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the Service (1) fails to assume and implement the terms and conditions or (2) fails to require the Agencies to adhere to the terms and conditions of the Incidental Take Statement through enforceable terms that are added to the Permit or grant document, the protective coverage of Section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Service or the NRCS must report the progress of the action and its impact on the species to the Service as specified in the Reporting Requirements below. [50 CFR §402.14(i)(3)]

Amount or Extent of Take Anticipated

During the terms of these Cooperative Agreements, Utah prairie dogs are expected to continue to occupy and expand upon the restored habitat on the "enrolled properties." Incidental take of Utah prairie dogs could occur as a result of a variety of normal grazing, ranching, and farming activities as well as the implementation of the conservation measures identified in the programmatic Safe Harbor Agreement. This take will be minimized substantially through the implementation of Standard Activities included in each Cooperative Agreement. Take may also occur through control of animals whose numbers exceed 20 (as determined in the spring count) or twice the baseline (whichever is larger). These minimum numbers of animals required before control would be authorized will limit the number of Agreements that would authorized to control prairie dogs to only those whose measures have shown success in conserving Utah prairie dogs.

Actual take numbers from routine ranching activities and from implementing the conservation measures are difficult to quantify because we are unable to characterize each site that may enroll

in this program, specific conservation measures planned on the sites, and the individual success of the conservation measures. In addition, the number of landowners and the degree to which they elect to participate in the Agreement over the 35-year term of the Agreement and associated section 10(a)(1)(A) permit are not known. It is also unknown how many participating landowners will elect to return lands enrolled under the Agreement to baseline conditions. However, we anticipate the maximum potential level of take to be:

- Up to all Utah prairie dogs at all enrolled properties established under the Agreement that are above baseline condition, through incidental take associated with normal grazing, ranching, and farming activities as well as the implementation of the conservation measures identified in the programmatic Safe Harbor Agreement.

Effect of Take

In the accompanying Biological Opinion, the Service determined that the level of anticipated take is not likely to result in jeopardy to this species. No critical habitat has been designated for the Utah prairie dog.

The incidental take, while it may result in the loss of some Utah prairie dogs and habitat, will never result in reductions below baseline conditions. Cooperators must maintain at least as many acres of occupied habitat and adult animals as were present on the enrolled property when the Cooperator entered into the program. Furthermore, as explained in the Effects of the Action section of this document, we determined that the proposed Agreement would provide a net benefit to the Utah prairie dog. Therefore, the potential incidental take would not negatively affect the current status of the species.

The Agreement authorizes incidental take of the covered species, because without the voluntary habitat improvements associated with this Agreement, it is unlikely that increased Utah prairie dog habitat and colony size would continue to occur on these private lands. If, after the term of these Agreements, the Cooperators propose to undertake any actions that fall outside the scope of habitat enhancements or their normal grazing, ranching or farming operations, they will give the Service at least 60 days advance notice thereof and provide the Utah Department of Wildlife Resources (UDWR) an opportunity to relocate any affected individuals. This provision also encompasses expected actions that will result in the taking of the covered species, including any activities that will return the Cooperators' Properties to baseline conditions. The Cooperators and the Service will work cooperatively to minimize negative impacts to the covered species from such actions.

Reasonable and Prudent Measure

The Service believes the following reasonable and prudent measure is necessary and appropriate for all Agencies to minimize impacts of incidental take of Utah prairie dogs.

1. Measures shall be implemented during the life of this Safe Harbor Agreements to prevent Utah prairie dogs from being killed or harmed by any project-related activity.

Terms and Conditions for the U.S. Fish and Wildlife Service

In order to be exempt from the prohibitions of Section 9 of the Act, the Fish and Wildlife Service must ensure implementation of these Safe Harbor Agreements comply with the following Term and Condition, which implements the Reasonable and Prudent measure described above.

To implement Reasonable and Prudent Measure number 1, the following Terms and Conditions shall be implemented:

a) The Service shall carry out all responsibilities outlined in the Safe Harbor Agreement.

b) All permits issued to relocate Utah prairie dogs from these Properties must utilize Service approved relocation guidelines.

c) All guidelines contained in the 10(a)(1)(A) permit associated with this consultation will be implemented.

Term and Condition for the Natural Resources Conservation Service

In order to be exempt from the prohibitions of Section 9 of the Act, the Natural Resources Conservation Service must ensure that funding provided to private landowners enrolled under this Safe Harbor Agreements to carry out various practices on those private lands, complies with the following Term and Condition, which implements the Reasonable and Prudent measure described above.

To implement Reasonable and Prudent Measure number 1, the following Term and Condition shall be implemented:

a) Coordinate with the Fish and Wildlife Service on all funded activities associated with these Safe Harbor Agreements to insure that impacts to Utah prairie dog are minimized and avoided.

REPORTING REQUIREMENTS

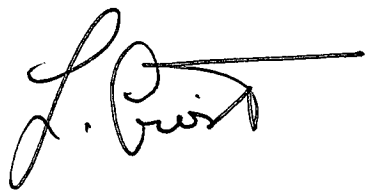
Upon locating a dead or injured Utah prairie dog, initial notification must be made within one business day to the Service's Division of Law Enforcement in Cedar City, Utah at telephone (435) 865-0861, the Service's Ecological Services Office at telephone (801) 975-3330, and the Cedar City office of the Utah Division of Wildlife Resources at telephone (435) 865-6120.

Instructions for proper handling and disposition of such specimens will be issued by the Service's Division of Law Enforcement consistent with the provisions of the Incidental Take Statement. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Dead specimens should be handled carefully to preserve biological material in the best possible state.

RE-INITIATION STATEMENT

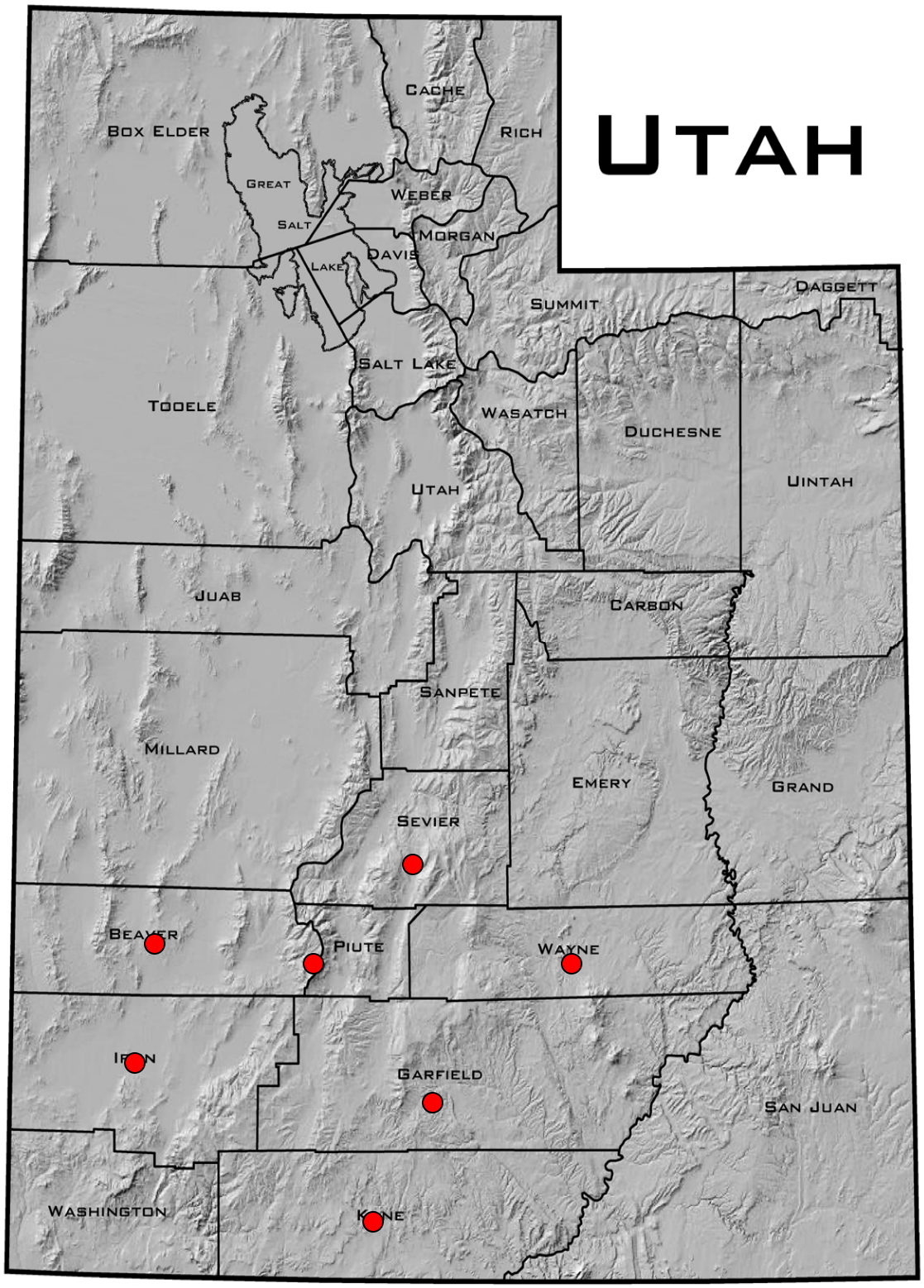
This concludes formal consultation on the proposed programmatic Safe Harbor Agreement and associated Permit. As provided in 50 CFR 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may impact listed species or critical habitat in a manner or to an extent not considered in this opinion, 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion, or 4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending re-initiation.

Thank you for your interest in conserving threatened and endangered species. If you have any questions please contact Kate Schwager at 801-975-3330, ext. 132, respectively.



cc: Keith Day, Utah Division of Wildlife Resources, Southern Regional Office, 1470 North Airport Road, Cedar City, Utah 84720

Panoramaland RC&D Coordinator and Council, 150 East 900 North, Richfield, Utah 84701



State Map of Areas Included in the Programmatic Safe Harbor Agreement

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