



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Mountain-Prairie Region

IN REPLY REFER TO:

FWS/R6
CO/KS/NE/UT

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228-1807

JUN 29 1998

Memorandum

To: Field Supervisor, Utah Ecological Services Field Office

From: Assistant Regional Director, Colorado/Kansas/Nebraska/Utah

Subject: Intra-Service Endangered Species Act Section 7 Consultation for Issuance of an Endangered Species Act Section 10(a)(1)(B) Incidental Take Permit for Utah Prairie Dog to the Utah Division of Wildlife Resources and Iron County for Activities in Iron County, Utah

This biological opinion was prepared at the request of the Utah Ecological Services Field Office of the U.S. Fish and Wildlife Service as required by the Endangered Species Act of 1973, as amended, for proposed issuance of a section 10(a)(1)(B) incidental take permit for Utah Prairie Dog (*Cynomys parvidens*) associated with implementation of the Utah Division of Wildlife Resources/Iron County Habitat Conservation Plan in Iron County, Utah. The Federal action constituting a section 7 nexus under the Act is issuance of an incidental take permit by the Service. 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 Utah Prairie Dog is Federally listed as a threatened species and occurs across much of Iron County, Utah. This biological opinion addresses impacts of the proposal to this species and was prepared using information contained in the incidental take permit application package prepared by the Division and Iron County Commission (collectively, the Applicants). Additional information was obtained from existing Service files and communications among Service employees and representatives from the Division and Iron County.

BIOLOGICAL OPINION

It is the Service's biological opinion that the proposed issuance of this incidental take permit is not likely to jeopardize the continued existence of the Utah Prairie Dog. No critical habitat has been designated for this species; therefore, no critical habitat will be destroyed or adversely modified by this project.

The threatened Bald Eagle (Haliaeetus leucocephalus) is the only other Federally-listed species which may be impacted by the proposed action. The Service has determined that the proposed action may affect, but is not likely to adversely affect, the Bald Eagle. No further analysis of impacts to this species is included in this biological opinion.

Project Description

The Service proposes to issue an incidental take permit, pursuant to section 10(a)(1)(B) of the Act, to the Division and Iron County, for a period of 20 years. Taking will be in association with various non-Federal projects in Iron County. This permit would allow specified take levels for Utah Prairie Dogs by non-Federal entities on non-Federal property within the county when regulations accompanying presence of Utah Prairie Dogs and their habitat hinders otherwise legal uses of the property on which they reside. Details of this alternative are found in the Division/Iron County HCP (Iron County/Division 1998). Proposed management actions including minimizing and mitigating take are described later in this biological opinion, and in detail on pages 30-65 of the HCP. Authorized take would include harm, harassment, and direct mortality of Utah Prairie Dogs. However, if the Service determines that the obligations of the section 10(a)(1)(B) permit are not being met (e.g., unauthorized taking or permit violations by the cooperators is occurring), the permit may be suspended or revoked if remedial actions are not immediately implemented to alleviate such violations.

Two types of take would occur under this incidental take permit: 1) "permanent" take where habitat is permanently destroyed, and 2) "non-permanent" take, in which the number of Utah Prairie Dogs in a colony is reduced, but no long-term habitat destruction occurs. Permanent take from development activities such as residential or commercial construction, road construction, parking lot development, excavation, etc., contributes to a net loss of habitat and adversely affects resident Utah Prairie Dogs and future occupation of the site by Utah Prairie Dogs. However, it may not necessarily result directly in death unless Utah Prairie Dogs are hibernating and unable to escape construction activities. Nonpermanent take results in a reduction of animal numbers, but no net loss of habitat. Nonpermanent take may occur in areas where Utah Prairie Dogs are inhabiting agricultural lands, private

rangelands, recreation areas, or where presence of Utah Prairie Dogs interferes with facilities maintenance. It would also occur where the presence of Utah Prairie Dogs causes safety concern, as determined by the Implementation Committee, and in areas that were previously cleared through legal means.

Recovery success depends upon both the continued survival of existing public land colonies and the establishment of new Utah Prairie Dog colonies on public lands. Therefore, allowable levels of permanent take of habitat and/or animals on non-Federal property will depend upon successful creation of new habitat and establishment of Utah Prairie Dogs on public lands such that there is at least no loss of habitat potential. Maximum annual amounts of allowed permanent take would depend upon:

1. parameters determined from population modeling to ascertain levels of take that will not jeopardize the species,
2. successful establishment of Utah Prairie Dogs on public lands, or long-term conservation of Utah Prairie Dogs on non-Federal lands (e.g., conservation easements), and
3. implementation of measures to minimize and mitigate take.

Annual permanent take would be quantified in terms of habitat acres and number of animals taken. Because Utah Prairie Dogs may no longer exist at many of the locations on non-Federal lands where they have been mapped, but habitat remains intact, permanent take would be limited by either the number of Utah Prairie Dogs or acreage of habitat permanently taken. When the allowed limit of either acreage or Utah Prairie Dog numbers is reached, no further permanent take would be allowed during that calendar year. The maximum allowed permanent take of animals would not be more than 10 percent of the average spring count of adult Utah Prairie Dogs on public lands during the preceding 5 years. The percentage of allowed take would increase to 15 percent once counts on public lands reach 1,500 adult Utah Prairie Dogs as long as the other two conditions (number of public land complexes and quantity of public acreage providing Utah Prairie Dog habitat) are met. The maximum allowed take of habitat initially would not exceed one percent of the total non-Federal land habitat, and would increase as additional public land sites become established.

As more acceptable habitat is created/enhanced, and additional Utah Prairie Dog colonies are established, further permanent take on non-federally owned habitat would be allowed. Acreage protected through the establishment of long-term conservation easements on non-Federal property would count towards the protected land total as well. The remainder of Utah Prairie Dogs needed

for translocation to public lands would come from nonpermanent sources. Utah Prairie Dogs translocated to recovery sites, although considered taken for purposes of development, will remain protected under State law and the Act, and would be afforded full protection of a listed species under the Act.

Maximum allowed permanent take would depend upon implementation of mitigation efforts and establishment of Utah Prairie Dogs on public lands, and shall not exceed that listed in the Division/Iron County HCP. Allowable permanent take is expected to be at least 40 individuals or 400 acres based on current distribution and numbers. Permanent take that remains unused during 1 year will be credited for the following year only. Failure to implement mitigation measures will result in no allowable take.

Nonpermanent take would be restricted to Utah Prairie Dogs which are 1) inhabiting croplands, pastures, or private rangelands, 2) reinhabiting previously cleared areas after construction is complete, 3) inhabiting recreational areas that remain suitable as habitat (e.g., golf course, softball fields), 4) inhabiting areas requiring maintenance (e.g., roads), 5) inhabiting sensitive areas (e.g., cemeteries, archaeological sites), and 6) compromising safety concerns (e.g., airport runway) as identified by the Implementation Committee. In nonpermanent take situations, as many Utah Prairie Dogs as can be accommodated at translocation sites will be live-trapped and translocated. In situations where translocation sites cannot accommodate demand, landowners may be issued limited permits under the existing section 4(d) rule, to remove the remaining allowed animals by shooting or trapping.

In the case of areas previously developed which have not undergone a section 10 clearance, but which have become occupied by Utah Prairie Dogs, the area would be treated similarly to undeveloped sites. If a landowner wanted Utah Prairie Dogs removed in order to conduct otherwise lawful activities, he/she would be required to conduct a clearance survey, complete an assessment of take, and schedule to have Utah Prairie Dogs trapped and translocated. Annual reports summarizing the impacts of the Proposed Action would be submitted to the Service by the Iron County Commission and the Division.

Because of the patchy distribution of Utah Prairie Dogs in Iron County, as well as the large percentage of occupied habitat and numbers of Utah Prairie Dogs on non-Federal lands, development of a county-wide HCP was analyzed. A county-wide HCP 1) allows for establishment of long-term levels of take and cumulative effects monitoring, 2) reduces costs to individual land owners, 3) allows for planning and reduces time delays for builders, 4) facilitates

cooperation between local, state, and Federal agencies and individuals, and 5) does not preclude, and may be designed to promote, Utah Prairie Dog recovery.

The Utah Prairie Dog Recovery Plan (U.S. Fish and Wildlife Service 1991) calls for establishment of Utah Prairie Dog colonies on public lands which can be managed to maximize colony persistence. A multi-party Recovery Implementation Committee has recommended developing public land sites where, over the next 5 years, research can be conducted on factors affecting colony success. Utah Prairie Dogs removed from private land under this incidental take permit will be translocated to designated colony sites where information will be obtained regarding translocation methods and success, habitat requirements, and physiological condition. This information is intended to be used to develop specific measures to define and achieve recovery.

Proposed Minimization Measures

Take will be minimized by implementing the following measures:

1. Utah Prairie Dogs will be trapped and translocated prior to ground disturbance and construction, providing there are sufficient translocation sites approved by the Service and Bureau of Land Management.

The primary minimization measure of the Division/Iron County HCP is the trapping and translocation of all Utah Prairie Dogs prior to initiation of construction activities at approved sites. Current established translocation protocols will be followed to maximize survival of translocated Utah Prairie Dogs. All HCP building permit requirements contained in section 6.9 of the HCP are intended to identify potential impacts to resident Utah Prairie Dogs and set in place a mechanism whereby ground disturbance can be avoided until prairie dogs can be translocated under a biologically acceptable protocol. Efforts to remove all Utah Prairie Dogs from a clearance area will continue at any given parcel until no more than one Utah Prairie Dog remains on parcels 3 acres or less in size, or two Utah Prairie Dogs remain on parcels larger than 3 acres.

2. Landowners will be encouraged not to develop or disturb habitat until Utah Prairie Dogs have been removed and translocated from their property. Unnecessary take will be discouraged.

The Division/Iron County HCP contains requirements to be followed by developers which function as disincentives to take of Utah Prairie Dogs and their habitat. These requirements are intended to allow people to pursue development of their property and be protected from any legal

infractions, while simultaneously discouraging others from simply seeking the removal of resident Utah Prairie Dogs and using up available translocation site space. Property owners intent on developing, who are interested in coverage provided by this incidental take permit and the directives of this HCP, must be prepared to pay for and pursue issuance of a building permit or submit to penalties for not beginning development within the year the building permit is issued.

Because the incidental take permit and the associated HCP do not allow for unlimited take and because there is a finite number of Utah Prairie Dogs that can be translocated each year, monetary penalties will be applied to those landowners who obtain a building permit for the sole purpose of removing Utah Prairie Dogs without the intention of developing. Those found to apply for and/or obtain a building permit without commencing construction within 1 year will be responsible for, but not restricted to, the following penalties: 1) the cost of the clearance survey(s) conducted on the property, and 2) the cost of removal for each Utah Prairie Dog. If it is deemed by any of the signatory parties that construction did not begin within the 1 year that the building permit was issued, there may be an investigation to determine if landowners are in violation of the Act. The developer is responsible for contacting the building permit office if development will not begin within 1 year's time.

3. City and County employees, landowners, and the general public, and those working in the building industry will be educated and informed so that they can recognize Utah Prairie Dogs, their sign, and their accompanying regulations. In addition, employees of the Division and/or the Service will explain the Division/Iron County HCP to them as such services are requested by the County.

The Iron County Commission will sponsor and organize an annual workshop on the natural history of the Utah Prairie Dog and explain fundamentals of the Division/Iron County HCP to pertinent County and City employees (for cities along the I-15 corridor) who work in or with the building industry (e.g., inspectors, planners, economic developers). These people in turn can help educate those with whom they work, and consequently the awareness level and support for the Utah Prairie Dog Recovery Program and Division/Iron County HCP should improve markedly. The Iron County Commission will require attendance of the above City and County employees, and will request representatives from the Division, the Service, and the Bureau to assist in the instruction.

4. Seasonal assistance will be provided to the Division for trapping, translocating, and monitoring Utah Prairie Dogs and their habitat.

Iron County will provide the Division with two technicians beginning with the Utah Prairie Dog spring survey in April of every year, through the end of the translocation and retrapping season in September. These individuals must meet Division approval and must be of equal education and/or experience as those individuals generally hired by the Division. The technicians must be compensated at a comparable rate to current Division technicians of equal education and/or experience. The Division will supervise these individuals and provide them with transportation and necessary equipment.

Proposed Mitigation Measures

1. Habitat Maintenance: Habitat maintenance measures shall be undertaken to maintain and improve the quality of Utah Prairie Dog habitat that is currently occupied.
2. Habitat Development: Habitat development measures shall be undertaken to create Utah Prairie Dog habitat where treatments (e.g., prescribed burns, brush beating, disking, seeding, fencing) will result in suitable habitat for future translocations.
3. Habitat Protection: Habitat protection measures on private land shall be undertaken as a supplement to the long-term management of Utah Prairie Dog habitat on public land. Each parcel considered for easements will have to be examined individually to determine if it would be valuable to serve as a conservation easement. The following requirements must be met before land is considered for a conservation easement:
 - a. The land in question must be at least 10 acres in size and must complement existing public land colonies or translocation sites or be large enough (minimum of 200 acres) to support a viable colony.
 - b. The land will be placed under easement status in perpetuity. This will be subject to review by the Iron County HCP Implementation Committee at bi-annual coordination meetings.
 - c. Conservation easements must allow for vegetation treatments if deemed necessary.
 - d. The easement must be issued jointly to Iron County and the Division.

Land placed under easements may be used in trade for clearing prairie dogs from other areas. For every 10 acres of land established as an easement, 1 acre of clearance will be granted. Acreage protected through establishment of conservation easements on non-Federal property will count towards the protected land total acres.

Utah Prairie Dogs will be afforded additional protection through conservation easements; therefore, the permanent take limit may be increased. Up to an additional 10 percent of the total number of prairie dogs on public lands may be taken as permanent take if conservation easements are in place. Land placed under easements may be used in trade for clearing Utah Prairie Dogs from other areas. For every 10 acres of land established as an easement, 1 acre of clearance will be granted (see Table 10 on pages 49-50 in HCP). Acreage protected through establishment of conservation easements on non-federal property will count towards the protected land total acres (see Table 9 on page 36 in HCP).

4. Research: An important mitigation measure is the research program to be implemented under this HCP. Utah Prairie Dogs from both permanent and nonpermanent take sites will be trapped and translocated to research sites developed by the Bureau, Iron County, and the Division.

This research program is outlined in the August, 1997 document entitled Utah Prairie Dog Interim Conservation Strategy (1997). This document was developed to supplement the Utah Prairie Dog Recovery Plan, which was completed in 1991. Current assessment of the recovery of the Utah Prairie Dog suggests that new strategies for recovery need to be implemented, and that recovery goals may need to be updated. Existing data suggest that the data and information necessary to modify recovery methods and goals are not yet available. The Utah Prairie Dog Interim Conservation Strategy, designed to be implemented over a period of approximately 5 years, has been proposed to complement the existing recovery plan and direct information-gathering efforts in three phases:

- 1) habitat improvement in association with existing Utah Prairie Dog complexes and new prairie dog translocations,
- 2) research to monitor translocation success and reevaluate recovery goals, and
- 3) public involvement to build a more cooperative effort in Utah Prairie Dog recovery.

Successful implementation of these new efforts (i.e., implementation of the Utah Prairie Dog Interim Conservation Strategy) will help improve the persistence of Utah Prairie Dog colonies and involve local citizens in recovery actions. The research phase will provide data that may be used to revise the Utah Prairie Dog Recovery Plan. Actions will include habitat improvement at existing prairie dog complexes and at new sites associated with these complexes on public land. Utah Prairie Dogs will then be translocated to one or more new sites to mitigate impacts of land development. Research will be conducted on the factors controlling population dynamics at existing complexes, the effects of range revegetation and grazing on the success of translocations, and the consequences of extinction of local populations for Utah Prairie Dog genetic diversity. These studies should help formulate new, achievable recovery goals that are more consistent with patterns in prairie dog population dynamics. Finally, an integrated program of involving schools, clubs, community groups, and businesses will be initiated to develop local awareness of prairie dogs and their habitat. This initiative will also inform local, State, and Federal government agencies, and agricultural producers of ways in which livestock and Utah Prairie Dogs might coexist. The participating agencies will summarize yearly efforts in a written annual report.

The proposed actions under the Utah Prairie Dog Interim Conservation Strategy are short-term and most could be completed within a 5-year period provided actions are initiated concurrently. Some activities, such as monitoring and data analysis, may need to be continued beyond this period. Once the research phase is completed, knowledge gained may be used to revise recovery goals and amend the Utah Prairie Dog Recovery Plan. The strategy provides direction for recovery efforts; specific implementation of proposed actions will involve additional detailed proposals which are consistent with actions permitted under the Act and other Federal laws.

This mitigation measure, coupled with the minimization measure of translocating Utah Prairie Dogs prior to permanent habitat loss, are necessary measures to obtain adequate information on the biotic and abiotic variables that affect establishment and survival of translocated Utah Prairie Dogs. If the conclusions of this research warrant such actions, the Utah Prairie Dog Recovery Plan (U.S. Fish and Wildlife Service 1991) may be updated and revised. This research would be much more difficult to complete without implementation of the Division/Iron County HCP and issuance of its accompanying incidental take permit.

5. Information and Education: As outlined above, the Iron County Commission will sponsor and publicize an annual workshop to inform interested publics about the HCP and incidental take permit. Iron County will also assist in a cooperative sign placement program with the Bureau at management sites to inform and educate visitors on the status and recovery of the Utah Prairie Dog.
6. Seasonal Personnel to Provide Assistance: Iron County will provide funding for seasonal personnel to provide assistance to the Division, as detailed above.

Status of the Utah Prairie Dog - Rangewide

The Utah Prairie Dog is the western-most member of the genus Cynomys. The species' range, which is limited to the southwestern quarter of Utah, is the most restricted of all prairie dog species in the United States. As could best be 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 occupied about 700 sections in 10 areas of southwestern Utah. The total species distribution was estimated to be 95,000 animals prior to control programs in the 1920s (Turner 1979).

By the 1960s, distribution of the Utah Prairie Dog was greatly reduced due to disease (plague), poisoning, drought, and human-related habitat alteration resulting from cultivation and poor grazing practices. 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 3,300 Utah Prairie Dogs existed in 37 separate prairie dog colonies. It appeared from this estimate that the Utah Prairie Dog would be extinct by the year 2000 (Collier and Spillett 1973).

The Utah Prairie Dog presently occurs in principal concentrations in only three areas: the Awapa Plateau along the East Fork of the Sevier River, eastern Iron County, and a few colonies existing in isolated mountain and desert valleys (Pizzimenti and Collier 1975, Hasenyager 1983). The Utah Prairie Dog was listed as an endangered species on June 4, 1973 (38 FR 14678), pursuant to the Endangered Species Conservation Act of 1969.

It appears that the decreasing trend in numbers may have stabilized since 1972 (Heggen and Hasenyager 1977), though numbers have vacillated greatly (McDonald 1993). Total population numbers have been as high as 7,400 in the 1989 spring census count (Coffeen 1989). In 1994 the spring count (which counts only

adult animals) was only approximately 3,700 animals, due in large part to poor range conditions and disease factors (McDonald 1993). In 1996, rangewide Utah Prairie Dog counts increased slightly to 3,961 (McDonald 1997), and in 1997 they increased again to 4,357 (Iron County/Division 1998). Work by Crocker-Bedford (1975) indicates that only 40 to 60 percent of Utah Prairie Dogs in a colony is above ground at one time, thus "census" counts underestimate the total number of animals.

The reestablishment of Utah Prairie Dog populations on public lands has been identified in the Recovery Plan for this species (Fish and Wildlife Service 1991) as necessary to ensure the continued existence of the species. Thus, in 1972, the Division initiated a translocation program to move animals from private agricultural lands to areas of historical occupancy on public lands. Over a 20-year period from 1972 to 1992, roughly 16,700 Utah Prairie Dogs were translocated to public land sites (McDonald 1993).

Despite limited survival of translocated animals, the number of active colonies on public land increased from 11 to 36 between 1976 and 1992 (McDonald 1993). Increase in the number of active colonies on public land is probably attributable to a combination of factors including the translocation program, natural increases at existing sites, and discovery of previously unrecorded colonies.

Because of the improved status of the species and the overwhelming increases seen on private lands in the Cedar and Parowan Valleys, where Utah Prairie Dog numbers climbed from a census count of 627 in 1976 to a spring census count of 3,699 animals in 1982 causing severe crop damage, the Division 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 then in imminent danger of extinction and published the Final Rule reclassifying the species to threatened on May 29, 1984 (49 FR 22330).

Rangewide spring survey counts conducted by the Division in 1996 revealed 3,961 Utah Prairie Dogs (McDonald 1997). Despite the aforementioned public land efforts at establishing new Utah Prairie Dog colonies and supplementing existing ones, 78 percent of Utah Prairie Dogs still occur on private lands (McDonald 1997).

Environmental Baseline

*Status of the Species within the Action Area
(West Desert Recovery Area)*

The Utah Prairie Dog was on the original list of federally protected species when the Act was signed into law in 1973. Major causes of its decline in Iron County were identical to those elsewhere across its range: habitat loss and degradation, drought, uncontrolled shooting, poisoning, and disease (primarily plague).

Since the Utah Prairie Dog was placed on the list of endangered and threatened wildlife under the Act, there have been three forms of legal take authorized by the Service. They are 1) incidental take permits issued under section 10(a)(1)(B) of the Act, 2) incidental take statements associated with biological opinions issued under section 7 of the Act, and 3) control permits issued under section 4(d) of the Act.

Previously, five Endangered Species Act section 10(a)(1)(B) incidental take permits for Utah Prairie Dog were issued within Iron County. Two of these permits were issued in 1995, two in 1996, and one in 1997. Total number of authorized take of Utah Prairie Dogs under these section 10(a)(1)(B) permits was 398, though actual take levels were significantly less; of these 398 Utah Prairie Dogs authorized for take, only nine have actually been trapped and translocated to date, and only one was ever confirmed as killed. It is important to note that, as is the case to date, the gross majority of the Utah Prairie Dogs that are "taken" under the authorization of these permits are trapped and translocated, and are not actually killed. In fact, Utah Prairie Dogs that are trapped and translocated can still contribute to recovery in their public land colonies. These permits also authorized the permanent loss of 101.7 acres of historical, potential, and occupied Utah Prairie Dog habitat.

Twenty-one consultations for Utah Prairie Dogs have been conducted under section 7 of the Act in Iron County, Utah since 1979. Five of these were associated with issuance of section 10(a)(1)(B) incidental take permits, which have already been accounted for in the previous paragraph. Another biological opinion was issued for the special rule under section 4(d) of the Act, whose impacts are detailed in the following paragraph. Six biological opinions did not specify how many Utah Prairie Dogs could be legally taken, but two of these six involved only the authorization to translocate Utah Prairie Dogs, and therefore merely allowed actions required by the species' Recovery Plan. In total, the remaining nine section 7 consultations resulted in an authorization to directly take 25 Utah Prairie Dogs in Iron County.

Under the section 4(d) rule, 7,298 Utah Prairie Dogs have been reported as taken (i.e., killed) in the West Desert Recovery Area since the rule was authorized in 1984 (Iron County/Division 1998). Average annual take has

therefore been 521 animals per year within the West Desert Recovery Area. Biologists are convinced that this mortality is compensatory -- i.e., they assume that, because approximately 73 percent of Utah Prairie Dogs born every year fail to survive until the following spring when they would have an opportunity to reproduce, this legalized shooting causes in large part the death of portions of the population which would otherwise die from starvation, disease, or predation before contributing to recovery of the species. Issuance of control permits under the section 4(d) rule has dramatically reduced the human/prairie dog conflicts occurring on agricultural land. Service and Division biologists suspect that the overall population from year to year does not suffer adverse impacts from implementation of the section 4(d) rule.

In addition to the aforementioned legal take of Utah Prairie Dogs under sections 7 and 10 of the Act, Service and Division officials acknowledge that continued development in Utah Prairie Dog habitat and illegal poisoning and shooting have reduced populations of this threatened species in some parts of Iron County. Though these threats are still present throughout the species' range, they have been alleviated to some degree through both education and law enforcement efforts by both the Division and the Service.

Roughly 85 percent of Utah Prairie Dogs in Iron County inhabit private land, and as private land is developed in Utah Prairie Dog habitat, the long-term prognosis for Utah Prairie Dogs in Iron County slowly worsens. Affected habitat in Iron County will be primarily in and around existing cities and towns. Cedar City, Kanarraville, Enoch, Summit, Parowan, and Paragonah are all expected to continue to experience expansion of the human population, and private property within and surrounding all of these towns supports Utah Prairie Dogs.

Of the three Recovery Areas designated in the Utah Prairie Dog Recovery Plan (U.S. Fish and Wildlife Service 1991), the West Desert Recovery Area has the largest number of Utah Prairie Dogs - 2,850 (65 percent) of the 4,357 counted rangewide in 1997. The Division/Iron County HCP encompasses the vast majority of the West Desert Recovery Area. The 1998 count of 2,929 Utah Prairie Dogs in the West Desert Recovery Area is roughly 492 animals above the average of 2,437 calculated from annual spring counts conducted since 1976 (O'Neill, pers. comm.). Numbers in the West Desert Recovery Area have fluctuated over this same period from a high of 4,843 in 1989 to a low of 375 in 1990. The status of the Utah Prairie Dog in the West Desert Recovery Area is therefore currently above average. However, the acreage of Utah Prairie Dog habitat has declined during this same period as the human population in Iron County has more than doubled (Iron County/Division 1998).

In summary, numbers of Utah Prairie Dogs in the West Desert Recovery Area are above average. However, suitable Utah Prairie Dog habitat is slowly shrinking county-wide as development proceeds, and exactly 700 Utah Prairie Dogs were counted on public lands in the West Desert Recovery Area in 1998 (O'Neill, pers. comm.).

Effects of the Action

Issuance of this section 10(a)(1)(B) incidental take permit to the Division and Iron County is projected to result in the permanent loss of as many as 9,507 acres of potential, historical, and occupied Utah Prairie Dog habitat. Over the life of the proposed 20-year permit, it is unknown how many Utah Prairie Dogs may be taken through direct killing or harassment (i.e., trapping and translocation). It is reasonable to assume that the gross majority of Utah Prairie Dogs "taken" under this permit's authorization will be trapped and translocated; they will not be directly killed.

Because the number of Utah Prairie Dogs to be taken cannot exceed 10 percent of the number of Utah Prairie Dogs existing on public lands, the number of Utah Prairie Dogs taken will increase as Utah Prairie Dogs thrive on public land. Conversely, the number of Utah Prairie Dogs which may be taken under this permit will decrease if their numbers on public lands drop. When more than 1500 Utah Prairie Dogs exists on public land, 15 percent of the count may be taken on private lands. For this reason, the Service is confident that legal take levels will remain at levels which will not threaten to drive the species further toward extinction.

One significant effect of issuing this incidental take permit to Iron County and the Division will be that it will implement portions of the Utah Prairie Dog Interim Conservation Strategy. Based on analysis of translocation success (McDonald 1993) and population data (Ritchie 1995), it has become apparent that recovery goals in the current Utah Prairie Dog Recovery Plan are vague, making recovery essentially unachievable based on the plan's goals. Consequently, it has been recommended that recovery goals may need to be revised for the following reasons: 1) to incorporate more fully metapopulation theory and its application to Utah Prairie Dog population dynamics and recovery (Ritchie 1995), 2) to take into consideration more current data on the biology and habitat needs of the Utah Prairie Dog, and 3) to integrate the latest principles of conservation biology. Because data is still lacking on specific habitat requirements of Utah Prairie Dogs, the aforementioned Strategy has been proposed to direct recovery efforts for the next five to ten years. The Strategy proposes to 1) improve habitat at existing complexes, 2) conduct translocations and research at a minimum of

eight new translocation sites associated with existing sites (four of which are in the West Desert Recovery Area), and 3) develop a collaborative learning program and information and education campaign to help resolve conflicts and foster local cooperation in Utah Prairie Dog recovery.

Issuance of this incidental take permit will facilitate the translocations necessary to implement the Utah Prairie Dog Interim Conservation Strategy explained above. Under the permit, the Division and Iron County will provide steady numbers of Utah Prairie Dogs for the research sites. Research results will be used to improve future Utah Prairie Dog recovery efforts, and it is also anticipated that many of the research sites will become permanent Utah Prairie Dog colonies which will contribute to recovery and eventual delisting of the species.

Cumulative Effects

Cumulative effects are those effects of future non-Federal (State, local government, or private) activities on endangered and threatened species or critical habitat that are reasonably certain to occur during the course of the Federal activity subject to consultation. Future Federal actions are subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed action. By definition, this incidental take permit and its accompanying Habitat Conservation Plan cover all private (non-Federal) lands and projects within the political boundaries of Iron County, Utah. No sites which might qualify for a section 7 consultation (e.g., projects which utilize Federal funding, require a Federal permit, or which occur on Federal property) are covered by this incidental take permit. Consequently, there are no cumulative effects as these are defined above.

Conclusion

After reviewing the current status of the Utah Prairie Dog, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is the Service's biological opinion that issuance of an Endangered Species Act section 10(a)(1)(B) incidental take permit for Utah Prairie Dog to the Iron County Commission and the Utah Division of Wildlife Resources, as proposed, is not likely to jeopardize the continued existence of the species. No critical habitat has been designated for this species; therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act, as amended, prohibits any "taking" (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed fish and wildlife species without special exemption. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. "Harass" is defined as 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 any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or Applicant. Under terms of section 7(b)(4) and 7(o)(2) of the Act, taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with this incidental take statement. This biological opinion does not authorize any take of Utah Prairie Dogs that is not incidental to construction within the project area.

The Service hereby incorporates by reference the Applicants' measures from their Habitat Conservation Plan into this incidental take statement as part of these Terms and Conditions. The following Terms and Conditions either specify additional measures considered necessary by the Service or modify or clarify those measures proposed by the Applicants. Where these Terms and Conditions vary from or contradict measures proposed under the Habitat Conservation Plan, specifications in these Terms and Conditions in this Incidental Take section shall take precedence.

The proposed action under review in this consultation is directed toward the incidental taking of Utah Prairie Dogs and their habitat, and is a permitted activity under Service authorities. The Applicants have a continuing obligation to regulate the activity that is covered by this incidental take statement. If the Applicants fail to adhere to the Terms and Conditions of the incidental take statement, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

Based on results of the analysis of impacts provided above, mitigation measures proposed by the Applicants (and herein incorporated as Terms and Conditions), and consultation with Division biologists, the Service anticipates that the following take could occur as a result of the proposed action:

1. An undetermined number of Utah Prairie Dogs are authorized to be taken indirectly or directly. Almost all take will be indirect, as it will occur via capture and translocation by employees of the Division and Iron County, as outlined above. Direct take will be rare (probably less than 10 percent of take), and in the form of mortality through accidental death or injury during site construction. Actual numbers of Utah Prairie Dogs to be taken will vary with the numbers of Utah Prairie Dogs on public lands, and with the fluctuations of prairie dog populations on private lands, and therefore cannot be determined.
2. Permanent destruction of up to 9,507 acres of potential, historical, and occupied Utah Prairie Dog habitat, resulting in harm to the Utah Prairie Dog, is authorized through the otherwise legal development or maintenance of non-Federal lands by non-Federal entities in Iron County.

The measures described below are nondiscretionary, and must be undertaken by the Applicants, as appropriate, in order for the exemption in section 7(o)(2) of the Act to apply.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

Reasonable and Prudent Measures

The Service believes that the following Reasonable and Prudent Measure is necessary and appropriate to minimize the incidental take authorized by the section 10(a)(1)(B) incidental take permit.

Any incidental take of Utah Prairie Dog must be in compliance with all of the Terms and Conditions of the section 10(a)(1)(B) incidental take permit, including provisions of the HCP and the Permit Implementation Statement.

Terms and Conditions

In order to be exempt from the prohibitions of the Act's section 9, the following mandatory Terms and Conditions, which implement the Reasonable and Prudent Measure above, must be complied with.

1. An incidental take permit, issued under the authority of section 10(a)(1)(B) of the Act, as evaluated in this biological opinion, shall be issued by the Service to both the Division and Iron County.
2. The HCP must be implemented in its entirety. The Applicants, the Service, and other signatories thereto shall fulfill all commitments contained in the HCP, the section 10(a)(1)(B) incidental take permit, and the Permit Implementation Statement. Service findings with regard to nonjeopardy or effect of the proposed action on listed species are based on implementation of all proposed actions by all participants contained in the HCP.
3. The Service must monitor and facilitate the Applicants' compliance with the requirements of the aforementioned permit, HCP, and Permit Implementation Statement.

This incidental take statement authorizes take of Utah Prairie Dog on non-Federal habitat in Iron County, Utah. It does not authorize any take of Utah Prairie Dog that is not incidental to otherwise legal activities on non-Federal lands in Iron County.

The Reasonable and Prudent Measure, with its implementing Terms and Conditions, is designed to minimize direct incidental take (i.e., mortality) of Utah Prairie Dogs that might otherwise result from the proposed action. With implementation of these measures the Service believes that no more than 15 percent of all Utah Prairie Dogs to be incidentally taken via this permit will be taken through direct mortality over the 20-year permit period. Direct take is not entirely unavoidable for two primary reasons. First, some animals prove very difficult, if not impossible, to trap and thus translocate. These trap-shy prairie dogs will be given a reasonable amount of time to be trapped and translocated, but eventually they will be assumed to be unavoidably taken and authorized actions will proceed. Also, some Utah Prairie Dogs tend to recolonize areas from which they have been cleared. While a good-faith effort to trap and translocate these animals will be undertaken, it is possible that some will find their way back to a "cleared" site and be killed by construction equipment or other development-related dangers.

If, during the course of this action, the allowed level of incidental take (as such is outlined in the HCP) is exceeded, such incidental take represents new information requiring review of the Reasonable and Prudent Measures. If the take limit is met, the Applicants must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the Reasonable and Prudent Measures.

CONCLUSION

This concludes formal consultation on the issuance of an incidental take permit issued under the authority of section 10(a)(1)(B) of the Act to the Division and Iron County Commission for Utah Prairie Dogs on non-Federal property in Iron County, Utah. As required by 50 CFR 402.16, reinitiation of formal consultation is required 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 biological opinion, 3) the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this biological opinion, or 4) a new species is listed or critical habitat designated that may be affected by the action.

In light of the aforementioned facts, it is critical that issuance of this incidental take permit not preclude recovery of the species and its eventual removal from the list of Federally threatened and endangered species. Implementation of the HCP must be complete to ensure that recovery opportunities for the species are not lost or otherwise compromised.

A handwritten signature in black ink, reading "Joe Webster". The signature is written in a cursive style with a large, sweeping initial "J".

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bcc: Chief, Division of Habitat Conservation, Washington, D.C.
FWS, ES, Salt Lake City, UT
FWS, LE, Region 6, Denver, CO, Mail Stop 69400
FWS, LE, Ogden, UT
FWS, LE, Cedar City, UT
Chief, Wildlife Section, Utah Division of Wildlife Resources, 1594
West North Temple Street, Suite 2110, Salt Lake City, Utah 84114-
6301
Regional Manager, Southern Regional Office, Utah Division of
Wildlife Resources, 622 North Main Street, Cedar City, Utah
84720
Area Manager, Beaver River Resource Area, U.S Bureau of Land
Management, 176 East D.L. Sargent Drive, Cedar City, Utah 84720
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