DRAFT

LOW-EFFECT HABITAT CONSERVATION PLAN

FOR THE

UTAH PRAIRIE DOG

IN

RESIDENTIAL AND COMMERICAL DEVELOPMENT AREAS

OF

IRON COUNTY, UTAH

Submitted by:

Iron County Commission

To:

U.S. Fish and Wildlife Service
Utah Ecological Services Field Office

August 23, 2013

TABLE OF CONTENTS

TABLE OF CONTENTS ii
INTRODUCTION 1
Purpose and Need 1
Overall Goals and Objectives 2
Legal and Regulatory Framework 3
SCOPE OF THE HCP 5
Geographic Location 5
Covered Species 5
Permit Duration 5
Permit Area and Utah Prairie Dog Habitat 6
Covered Activities 10
HCP PROVISIONS 11
Overall Take 11
Occupied Habitat and Take Acreages 11
Take Zones 12
Take Approval/Authorization Process 13
Summary 13
CONSERVATION STRATEGY 14
Biological Goals and Objective 14
AVOIDANCE AND MINIMIZATION MEASURES 17
Conserving Large, Medium Quality, and High Quality Occupied Habitats 17
Translocations 17
MITIGATION PLAN 19
Mitigation Selection 19
Mitigation Benefits 21
BIOLOGICAL INFORMATION AND SPECIES STATUS 22
STATUS OF THE SPECIES IN THE PERMIT AREA 22
Utah Prairie Dog Distribution 22

Vegetation 23
Soils 23
Wildlife 24
EFFECTS TO UTAH PRAIRIE DOGS 24
Overall Impacts to Utah Prairie Dogs 24
Specific Impacts to Utah Prairie Dogs and their Conservation 25
IMPLEMENTATION AND MONITORING 27
Biological Monitoring 27
Compliance Monitoring 28
Adaptive Management 28
Changed and Unforeseen Circumstances 29
Modifications and Amendment Procedures 31
PERMIT REVOCATION 32
Enforcement 32
Suspension 32
Revocation 32
Withdrawal of Participation 33
ASSURED FUNDING 33
ALTERNATIVES CONSIDERED 34
Alternative #1: No Action 34
Alternative #2: Long-Term, Rangewide HCP 34
Alternative #3 Proposed Action 34
REFERENCES 35
APPENDIX 1. HABITAT QUALITY 36

INTRODUCTION

The Iron County Commission (County) has applied for a permit pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973 (ESA) as amended (16 United States Code 1531-1544), from the U.S. Fish and Wildlife Service (USFWS) for the incidental take of the Utah prairie dog (*Cynomys parvidens*), a federally-listed threatened species. Incidental take could occur as a result of ongoing and future residential and commercial development in occupied Utah prairie dog habitat in Iron County, Utah. The permit area includes areas of occupied Utah prairie dog habitat that are either within already developed city limits, or within areas where the County expects development to occur within the near future. Proposed residential and commercial development could result in incidental take in the form of harm or harassment of Utah prairie dogs, including the loss of Utah prairie dog occupied habitats. Therefore, the County is applying for a section 10(a)(1)(B) permit and proposes to implement the habitat conservation plan (HCP) described herein, which provides measures for minimizing and mitigating impacts of the take to the Utah prairie dog. The HCP is intended to provide the basis for issuance of a section 10(a)(1)(B) permit to the Iron County Commission, the permit applicant, to authorize incidental take of the Utah prairie dog.

This HCP provides an assessment of the existing habitat for the Utah prairie dog in the permit area (see section 2.4, Permit Area), evaluates the effects of the proposed action, and presents a mitigation plan to offset habitat losses and harm to the Utah prairie dog that could result from residential and commercial development activities. The biological goal of this HCP is to maintain or adequately mitigate the loss of the most important prairie dog habitats remaining on private lands, and to utilize minimization measures (i.e., translocations) to assist with the recovery of the Utah prairie dog. The County will reduce the potential effects to the Utah prairie dog by identifying limited areas and acreages in which the take may occur; committing to either translocate prairie dogs off of lands prior to development (translocated prairie dogs would be moved to established translocation sites on federal lands and thus contribute to recovery of the species) or provide a $1,000/acre compensatory mitigation fee to a conservation fund for recovery activities; and mitigating the loss of large persistent colonies and medium and high quality habitats in “red zone” locations (see section 2.4, Permit Area, for descriptions of “zones”) with the purchase of credits from available conservation banks.

Purpose and Need

The USFWS issued a previous section 10(a)(1)(B) permit to the Iron County Commission and Utah Division of Wildlife Resources in 1998, that authorized incidental take of the Utah prairie dog from similar residential and commercial development activities in Iron County (hereafter referred to as the 1998 Iron County HCP). The 1998 Iron County HCP and associated permit remain in effect (expires in 2018), but underestimated the amount of incidental take now anticipated to result from ongoing development in the County.

The USFWS and Iron County began work on a Rangewide HCP (to include Iron, Garfield, and Wayne Counties) in 2006, however efforts to complete the Rangewide HCP have stalled due largely to concerns regarding funding mechanisms. Iron County has committed to proceed with

completing either the Rangewide or a new long-term Iron County HCP. However it is likely that completion of a new HCP will require 2-3 years. Therefore, this low effect HCP will provide a bridge, authorizing incidental take of the Utah prairie dog until a new long-term HCP can be completed.

As a bridge to a new long-term HCP, the County requests a permit for a period of no more than 99 years commencing on the date of permit approval. The ability to authorize take would extend for a period of 2 years, with an option to extend the ability to authorize take to a third year if the new long-term HCP has not been completed, but progress is being made (see section 2.3, Permit Duration). Progress on a new long-term HCP would be evidenced by a Notice of Availability of a draft HCP to the Federal Register or other similar milestones. The permit for this low-effect HCP would limit take to no more than 200 acres (81 hectares) per year of occupied Utah prairie dog habitat.

Overall Goals and Objectives

The HCP intends to meet the following goals and objectives:

1. Allow Iron County to proceed with residential and commercial development projects while minimizing impacts to Utah prairie dogs.

    - Receipt of a section 10(a)(1)(B) permit will allow Iron County to proceed with residential and commercial development projects on occupied Utah prairie dog colonies, where such projects may result in the incidental take of individual prairie dogs.

2. Assist with the conservation and recovery of Utah prairie dogs (see section 4.0, Conservation Strategy) in accordance with the goals and objectives of USFWS Final Revised Utah Prairie Dog Recovery Plan (USFWS 2012).

    - Contribute to recovery of the Utah prairie dog by establishing or augmenting Utah prairie dog colonies on federal lands through translocation efforts (see section 5.1, Translocation).

    - Contribute to recovery of the Utah prairie dog by contributing to the National Fish and Wildlife Foundation (NFWF) Utah Prairie Dog Conservation Fund when translocation of prairie dogs is not feasible (see section 9.1, Mitigation Selection)

    - Off-set impacts to large colonies, medium quality, and high quality Utah prairie dog occupied habitats in the “red zone” (see section 2.4, Permit Area, for descriptions of “zones.”) by purchasing credits from available conservation banks (see section 6.1, Mitigation Selection).

Legal and Regulatory Framework

This HCP was prepared to meet the legal requirements contained in 50 Code of Federal Regulations (CFR) §17.22(b)(1)(iii), which sets forth the application requirements for the ESA section 10(a)(1)(B) permit for incidental take of threatened or endangered species, in this case the Utah prairie dog. The development of habitat conservation plans and the issuance of incidental take permits are governed by the provisions of the ESA and related USFWS policy. The ESA specifies the required content of a habitat conservation plan and the criteria for issuance of an incidental take permit. An Implementation Agreement and Application Form will also be prepared. These documents constitute the permit application.

Section 9 of the ESA prohibits "take" of any federally endangered wildlife species (16 United States Code (USC) § 1538(a)). As defined by the ESA, "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC § 1532(19)). "Harm" is further defined by as "an act which actually kills or injures wildlife and may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding or sheltering." "Harass" is further defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering" (50 CFR § 17.3).

Section 10(a)(1)(B) of the ESA (16 USC § 1539(a)(1)(B)), authorizes the USFWS to issue a permit allowing take of species providing that the taking is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Section 10(a)(2)(A) of the ESA provides that the USFWS must issue an incidental take permit provided that the applicant meets several substantive criteria, including that the applicant submit a conservation plan that: (1) describes the impact that will likely result from the taking; (2) identifies the steps the applicant will take to minimize and mitigate the impacts and the funding available to implement those steps; (3) describes what alternative actions to taking were considered and the reasons the alternatives were not chosen; and (4) includes other measures that the USFWS may require as necessary or appropriate for purposes of the conservation plan (16 USC § 1539(a)(2)(A)). The USFWS Habitat Conservation Planning and Incidental Take Permit Processing Handbook ("HCP Handbook") provides guidance on the elements of a habitat conservation plan. ESA implementing regulations also give permittees (i.e., the County) "no surprises" assurances, which provide certainty as to their future obligations under a habitat conservation plan (50 CFR §§ 17.22, 17.32, 222.2; 63 Federal Register (FR) 8859).

Section 7(a)(2) of the ESA requires that each federal agency must consult with the USFWS to ensure that agency actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat (16 USC § 1536(a)(2)). "Jeopardize" is defined by the regulations as "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the

reproduction, number, or distribution of that species" (50 CFR § 402.02). As described in the HCP Handbook, issuance of an incidental take permit is considered an action for which Section 7(a)(2) applies (USFWS and NMFS 1996). With respect to the issuance of incidental take permits, the USFWS functions as both the "action" agency and the "resource" agency, so that the USFWS is actually consulting with itself. According to the HCP Handbook, the consultation must include consideration of the direct and indirect effects on the species, as well as the impacts of the proposed project on listed plants and critical habitat, if any (USFWS and NMFS 1996).

The issuance of an incidental take permit is a federal action subject to the requirements of the National Environmental Policy Act (NEPA) (42 USC §§ 4321-4327). The NEPA requires federal agencies to (1) study proposed projects to determine if they will result in significant impacts to the human environment; and (2) review the alternatives available for the project and consider the impact of the alternatives on the human environment (42 USC § 4332(c)). The scope of NEPA is broader than the ESA in that it requires the agency to consider the impacts of the action on the "human environment," including a variety of resources such as water, air quality, cultural and historic resources, and socioeconomic resources. In the context of a habitat conservation plan and incidental take permit, the scope of the NEPA analysis covers the direct, indirect, and cumulative effects of the proposed incidental take and the beneficial effects of the proposed mitigation and minimization measures described in the habitat conservation plan (USFWS and NMFS 1996). The HCP Handbook (USFWS 1996) describes the USFWS procedures for complying with NEPA with respect to habitat conservation plans.

Depending on the scope and impact of the HCP, NEPA compliance is obtained through one of three actions:

1) Preparation of an Environmental Impact Statement (EIS), generally prepared for HCPs that might result in significant impacts to the human environment,
2) Preparation of an Environmental Assessment (EA), generally prepared for HCPs that are not likely to result in significant effects to the human environment, or
3) Preparation of a categorical exclusion, generally prepared for HCPs that meet the qualifications for a low-effect determination.

A NEPA analysis will be completed by the USFWS to evaluate the impacts of this HCP on the human environment. The NEPA process helps federal agencies make informed decisions with respect to the environmental consequences of their actions and ensures that measures to protect, restore, and enhance the environment are included, as necessary, as a component of their actions. If an HCP meets the requirements for a categorical exclusion under NEPA, it may be processed as a low-effect HCP as outlined in the USFWS Habitat Conservation Planning Handbook (USFWS 1996) and as defined by the Department of Interior Manual 516 DM2, Appendix 1 and Manual 516 DM6, Appendix 1.

SCOPE OF THE HCP

Geographic Location

Iron County lies in southwest Utah, and is bordered by Washington County on the south, the Nevada state line on the west, Beaver County on the north, and Garfield County on the east. Parowan City is the County seat and is one of several municipalities along the Interstate-15 corridor in Iron County. The geographic location of the permit area (see section 2.4, Permit Area) includes the developing communities of Cedar City, Kanarraville, Enoch, Parowan, and Paragonah. The permit area lies within the West Desert Recovery Unit for the Utah Prairie Dog (USFWS 2012).

Iron County includes 3,296 square miles (8,538 square kilometers), or 4.0 percent of the total land mass of Utah (212,818 sq km / 82,167 sq mi). There are 1,905,661 acres of land in Iron County, spread among seven ownerships; of these, 64% are under Federal administration by the Bureau of Land Management, U.S. Forest Service, and National Park Service. Only 28 percent of the land in Iron County is privately owned (Iron County Commission 1998). The population density is 14 persons per sq mi compared to 33.6 persons per sq mi statewide. Iron County had a total estimated population of 46,163 in 2010, which was 1.7 percent of the total estimated population of the State of Utah (2,763,885). Iron County's population increased by 36.7 percent from 2000 to 2010 compared to a 23.8 percent increase for the State of Utah ((http://www.city-data.com/county/Iron_County-UT.html).

Covered Species

The covered species under this HCP is the threatened Utah prairie dog. Species proposed for coverage are those for which the plan provides conservation and management actions, and for which incidental take authorization under a section 10(a)(1)(B) permit may be required. Covered species are based on our assessment of the effect of the proposed activities and conservation measures on listed species or species that could become listed during the term of the HCP. We do not anticipate the listing of any other species occurring in the permit areas during the term of this HCP.

Permit Duration

The County is seeking a section 10(a)(1)(B) permit from the USFWS with a term of no more than 99 years. The actual use of take during the of the permit's term is requested as follows:

1) The incidental take permit (ITP) will be issued to the County.
2) The County would convey take authorization to the developers and property owners through a County Commission approval process for the first two years of the ITP, in the amount of no more than 200 ac (81 ha) per year. The restriction of authorizing take in only the first two years is because this low-effect HCP is considered only as a bridge to completing a long-term HCP (see section 1.1, Purpose and Need).

3) The County may convey take authorization to developers and property owners for an additional 200 ac (81 ha) for a third year if sufficient progress toward completing a long-term HCP is occurring. Sufficient progress toward completion of a long-range HCP would be evidenced by a Notice of Availability of a Draft HCP to the Federal Register or other similar milestones as determined in writing by the USFWS to the County.
4) The take authorized by the County Commission can be utilized by the developers and/or property owners anytime within the 99 years of the ITP.

Permit Area and Utah Prairie Dog Habitat

The permit area under this HCP includes the area where the covered activities will occur (see section 2.5, Covered Activities). The permit area includes areas where residential and commercial development is proposed in Iron County, within the green and red boundaries (i.e., zones) depicted in Figures 1 and 2. These zones were delineated based largely on current development levels: i.e., the green zone is largely already developed and the red zone still retains a large amount of agricultural and native rangeland habitats but is likely to be developed in the near future. Because of the highly developed nature of the green zone, the minimization and mitigation strategies are also different than those applied to the red zone (see sections 5.0, Avoidance and Minimization Measures and 6.0, Mitigation Plan).

This permit area is the specific area for which the County is requesting authorization for incidental take of the Utah prairie dog under a section 10(a)(1)(B) permit, and totals 97,172 ac (39,324 ha) (see Figures 1 and 2; section 2.5, Covered Activities). There are 6,802 ac (2,753 ha) of mapped (suitable) Utah prairie dog habitat within the permit area (Table 1). Mapped Utah prairie dog habitat is defined as all areas within the species' range that were identified and delineated as being occupied by Utah prairie dogs in any year since 1976. These areas may or may not be occupied by prairie dogs in any given year. The database of all mapped habitat is maintained by the UDWR and updated annually.

The mapped Utah prairie dog habitat in Figures 1 and 2 are delineated by color (gray, blue, yellow, red) based on the 10-year mean spring count (see section 8.1, Utah Prairie Dog Distribution, for a description of spring counts):

- Gray = 1-19 prairie dogs
- Blue = 20-49 prairie dogs
- Yellow = 50-99 prairie dogs
- Red = 100+ prairie dogs

Long term persistence of Utah prairie dogs will require the establishment and protection of large colonies. For example, an annual spring count of ≥ 50 animals is necessary for a single colony to have a 95% probability of persisting for 200 years (see Appendix G *in* USFWS 2012)—therefore yellow and red colonies are the largest and most important for long term persistence and are provided protection through the mitigation strategy (see section 6.0 Mitigation Plan) associated with this HCP. In addition, having a greater number of colonies within 3.1 miles (5 kilometers) of each other lowers the probability of population crashes—therefore, assessing the quality of habitat at prairie dog colonies is an important part of this HCP, because the assessment of habitat

quality accounts for connectivity (e.g., lack of barriers) and distance to next nearest prairie dog colony (Appendix 1).

Occupied habitats are defined as areas that support Utah prairie dogs (i.e., where prairie dogs are seen or heard or where active burrows or other sign are found). The basis for determining take in this HCP will be "occupied habitat." Mapped habitat is used throughout this document to provide a scope of analysis of impacts. However, once development is proposed on a site, a survey will be conducted to determine occupancy of the site by Utah prairie dogs. Occupancy may occur within or outside mapped habitats because Utah prairie dog colonies move across the landscape over time. However, because mapped habitat has been tracked for over 30 years (since 1976), it provides us with a reasonable assessment of the overall distribution and numbers of prairie dogs within our permit area for purposes of analysis.

Figure 1. Take Zones and Utah Prairie Dog Colonies, Cedar Valley

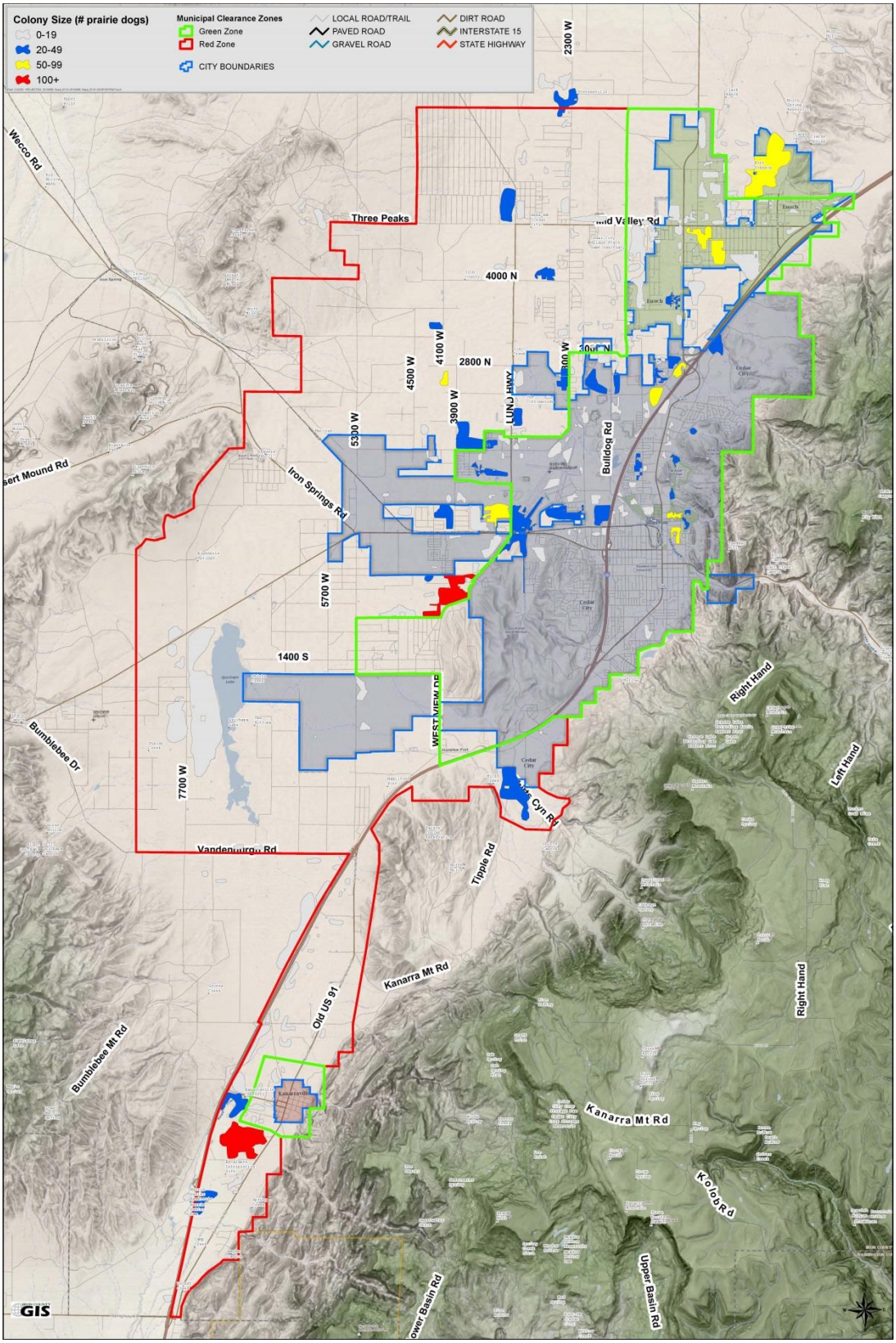

Figure 2. Take Zones and Utah Prairie Dog Colonies, Parowan Valley

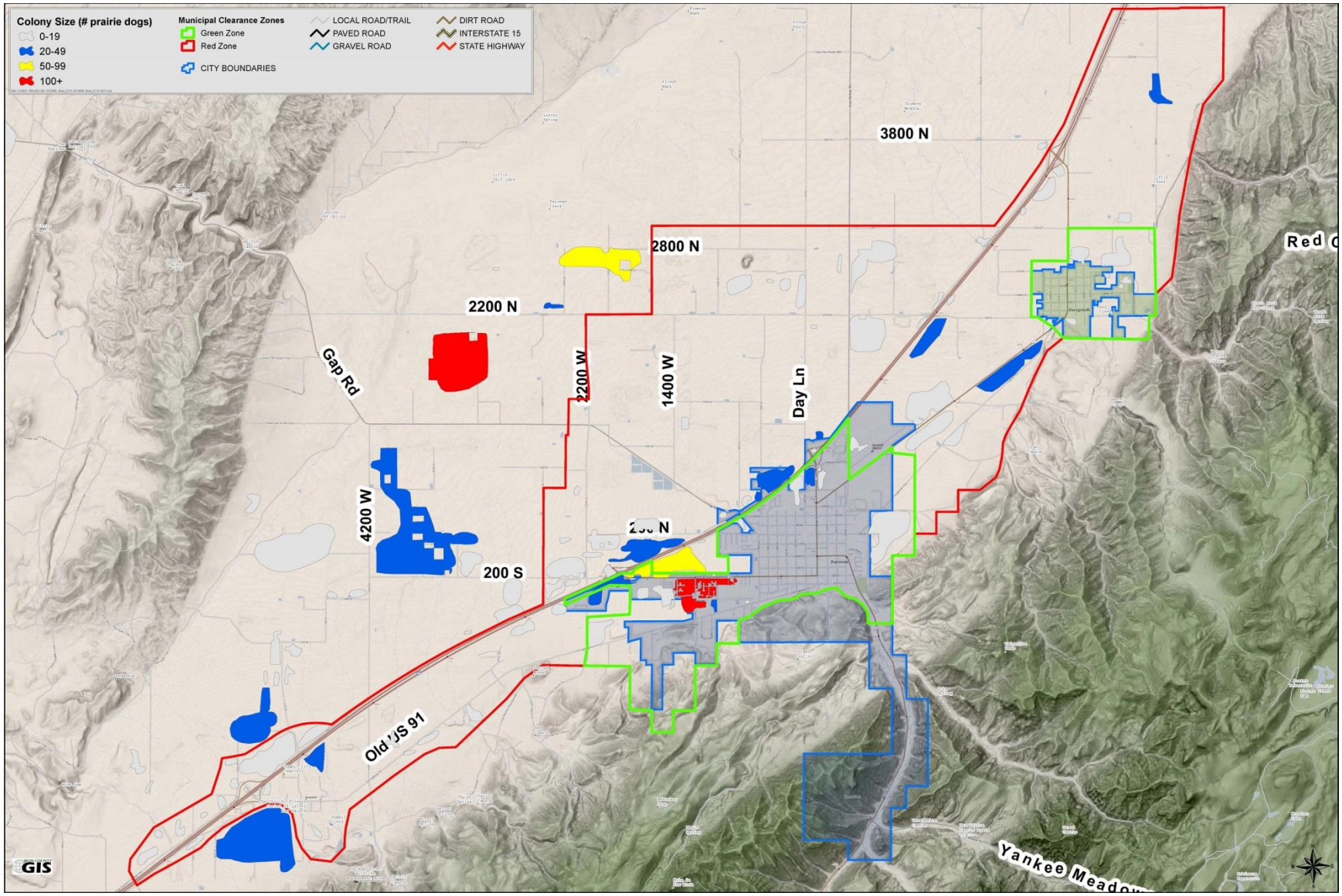

Table 1. Acres of Mapped Utah Prairie Dog Habitat in Take Zones

	Acres Gray Colonies	Acres Blue Colonies	Acres Yellow Colonies	Acres Red Colonies	TOTAL (acres)
Green Zone	1628.45	615.56	232.34	77.88	2554.23
Red Zone(but outside green zone)	2710.11	994.12	163.64	379.47	4247.34*
TOTAL (acres)	**4,338.56**	**1,609.68**	**395.98**	**457.35**	**6,801.57**

* Of the acreage in the red zone, 543 ac (220 ha) are considered large colonies with ≥ 50 prairie dogs 10-year mean spring count.

For purposes of this HCP, we describe two zones within the permit area (see Figures 1 and 2):

- Green zone – there are a total of 30,585 ac (12,377 ha) with 2,554 ac (1,034 ha) of mapped Utah prairie dog habitat within the green boundary line depicted in Figures 1 and 2 (also see Table 1).

- Red zone – there are a total of 66,588 ac (26,947 ha) with 4,247 ac (1,719 ha) of mapped Utah prairie dog habitat. The red zone includes those areas within the red boundary line, but outside of the green boundary line depicted in Figures 1 and 2 (also see Table 1).

Under this HCP and associated permit, up to 200 ac (81 ha) per year of occupied Utah prairie dog habitat may be disturbed or lost to residential and commercial development activities within the green or red zones. As stated previously, occupied habitat may include mapped habitat as well as areas that are not yet mapped, but which prairie dogs occupy at the time of development. Similarly, mapped, unoccupied habitat would not require authorization for take under this HCP.

Covered Activities

This HCP authorizes incidental take of Utah prairie dogs and the permanent loss of occupied Utah prairie dog habitat from residential and commercial development activities within two zones (see Figures 1 and 2; section 2.4, Permit Area). The incidental take will occur where habitat is permanently disturbed or destroyed, resulting in the loss or reduction of Utah prairie dog individuals or colonies. Take can occur from construction and development activities such as residential or commercial construction, road construction and maintenance, parking lot construction, and installation of utilities. Non-permanent take[1] is already authorized by the permit for the 1998 Iron County HCP and is thus not included as part of this low effect HCP.

The exact locations of all covered activities are not known at this time. However, all covered activities will occur within the 97,172 ac (39,324 ha) permit area (see section 2.4, Permit Area).

[1] Non-permanent take is defined by the 1998 Iron County HCP as take that results in a reduction of prairie dog numbers, but no net loss of habitat (Iron County Commission 1998).

The covered activities may not exceed the loss of 200 ac (81 ha) per year of occupied Utah prairie dog habitats.

HCP PROVISIONS

Overall Take

- The take in this HCP is considered to be in addition to the take authorized under the 1998 Iron County HCP. The 1998 Iron County HCP take authorization may be utilized at any time and at any locations throughout Iron County. However, to minimize the effects of these overlapping HCP take authorities, authorized take that does not occur in any given year under the 1998 Iron County HCP will no longer be carried forward to the following year.

- Take in the amount of 200 ac (81 ha) per year can be authorized by the County to the developers for only the first two years of the permit term, with a possible extension to a third year (see section 2.3, Permit Duration). Any unused take from the first year will be carried to the second year of the permit term, and potentially to the third year should an extension be granted.

- The take authorization in this HCP can be used by the developers during the 99-year term of the permit, once it is allocated to them by the County (see section 3.4, Take Approval/Authorization Process) and all minimization and mitigation measures have been implemented.

Occupied Habitat and Take Acreages

The HCP and associated permit will authorize take of no more than 200 ac (81 ha) per year of occupied Utah prairie dog habitat (and the prairie dogs that occur on those acres) within the permit area (Figures 1 and 2).

- Surveys will be conducted by properly trained and permitted individuals to determine presence or absence of Utah prairie dogs on a proposed project site and delineate "occupied habitat," consistent with the methods used in the 1998 Iron County HCP.

- The take acreages will be calculated for each project area based on the outer boundary of the proposed development. For example, if a developer proposes a subdivision on 50 ac (20 ha), the entire subdivision including roads, houses, and associated landscaping will be part of the overall impact calculation. As another example, if a single homeowner has 5 ac (2 ha) of property and intends to leave most of the property natural and unfenced, but plans to landscape and maintain a yard on 0.5 ac (0.2 ha), then the 0.5 ac (0.2 ha) will count toward the overall impact calculation.

Take Zones

As described above (see Figures 1 and 2; section 2.4, Permit Area), this HCP strategy is divided into two zones: green zone and red zone.

Take within each of the green and red zones will be assessed as follows:

1) Green zone – Any occupied habitat can be "taken" within the green zone as part of the 200 ac (81 ha) per year, regardless of the size or habitat quality of the colony. No habitat quality assessment is needed for any colonies within the green boundaries.

2) Red zone – Habitat quality assessments (Appendix 1) will be completed by properly trained personnel for proposed developments within occupied prairie dog habitats in the red zone. Only small, low quality occupied can be "taken" within the red zone as part of the 200 ac (81 ha) per year.

    a. Small, low quality habitats/colonies in this HCP are defined as having a 10-year mean of less than 50 prairie dogs 10-year mean spring count, and are determined to be low quality habitats as part of an on-the-ground habitat quality assessment (Appendix 1)[2]. When assessing the quality of a prairie dog colony, the habitat quality assessment (Appendix 1) evaluates the entire colony, not just the portion that is impacted by a project.

    b. No large colonies, medium quality, or high quality occupied habitat can be taken in the red zone as part of the 200 ac (81 ha) per year allowance.

        i. Large colonies in this HCP are defined as having ≥50 prairie dogs 10-year mean spring count, regardless of habitat quality.

        ii. Medium and high quality occupied habitat can include any size colony (e.g., gray, blue, yellow, red on Figures 1 and 2) that ranks as medium or high quality based on a habitat quality assessment (Appendix 1). Unmapped occupied habitat will also be assessed to determine habitat quality (Appendix 1).

        iii. The take of any large colonies (≥50 prairie dogs 10-year mean spring count), medium quality, or high quality occupied habitat within the red zone will be mitigated through the use of conservation banks (see section 6.0, Mitigation Plan), and as such will not count against the 200 ac (81 ha) per year take allocation.

[2] This habitat quality assessment form is adopted from the Utah Prairie Dog Habitat Exchange Program, which is still in its pilot phase. As such, the assessment form is still being field tested. Based on its use in this low-effect HCP, the HCP Implementation Committee may choose to revise portions or all of the assessment form for better accuracy in field evaluations.

This HCP also provides conservation measures to minimize and mitigate take of occupied Utah prairie dog habitat in the green and red zones. Please refer to section 5.0, Avoidance and Minimization Measures and section 6.0, Mitigation Plan for the zone-specific conservation measures. Take authorized under this HCP and associated permits will remain in effect in for up to 99 years—i.e., once take is "given" to a property owner/developer for a specific property through the County Commission approval process (see section 3.4, Take Approval/Authorization), that developer can implement construction activities at any time during the 99-year term of the permit.

Take Approval/Authorization Process

The 1998 Iron County HCP utilizes a building permit and County Commission approval process to issue incidental take to developers. A similar process will be followed with this HCP. It is anticipated that take will result from the destruction of occupied Utah prairie dog habitat by residential and commercial development. Before land can be developed, the owner/developer must first apply for a building permit from the local government jurisdiction in which the development will occur. Therefore, applying for a building permit will be the action that triggers whether take will occur, and approval by the County Commission will allow for quantification of take and implementation of the minimization and mitigation measures associated with this HCP (see sections 5.0 and 6.0).

Once the County Commission has authorized take, and all required minimization and mitigation measures have been completed (see sections 5.0 and 6.0), the developer can begin construction at any time during the 99-year term of the permit associated with this HCP. The actual take will be quantified and subtracted from the annual allotted 200 ac (81 ha) of Utah prairie dog occupied habitat in the first 2 years of the term of the permit. If actual take is not known prior to the end of the year in which it is authorized, then anticipated take will be accounted toward the 200 ac (81 ha) limit.

This HCP (as did the 1998 Iron County HCP) recognizes that not all activities resulting in the loss of Utah prairie dog occupied habitat require a building permit. Any ground disturbing activities that require specific approval must go through the following process if the landowner/developer wishes to be protected by the incidental take permit. In these instances, the local government granting approval (e.g., planning and zoning commission) will notify the applicant in writing of whether the area in consideration is Utah prairie dog habitat, and that person will be required to follow the same procedures as those applying for a building permit. A landowner who does not require a building permit may receive special approval in writing from the County Commission to be protected under this HCP if they choose.

Summary

This HCP covers impacts to Utah prairie dogs from residential and commercial development activities. The exact locations of all future proposed developments are not known at this time. To ensure that effects to Utah prairie dogs are adequately analyzed, this HCP evaluates a general permit area (see Figures 1 and 2; sections 2.4, Permit Area) where potential future residential and commercial development activities may occur for the duration of the permit. The HCP also

limits development impacts to 200 ac (81 ha) per year for a maximum 3 year permit term, and limits the quality of Utah prairie dog occupied habitat/colonies that may be taken under this 200 ac (81 ha) allocation.

CONSERVATION STRATEGY

Biological Goals and Objective

Biological goals provide the broad guiding principles for developing the HCP's operating conservation program, while the objectives identify measurable actions for achieving those goals. They clarify the purpose and direction of the HCP's conservation strategy and define what is to be accomplished by the end of the permit duration. Clearly articulated biological goals and objectives serve as the rationale for determining appropriate minimization and mitigation strategies. Biological objectives are also essential for providing benchmarks for the monitoring program to measure the effectiveness of the HCP's conservation program. Biological goals and objectives for this HCP are specific to the previously described green and red zones of the HCP strategy (see sections 2.4, Permit Area and 3.0, HCP Provisions).

1) Green Zone

Biological goals and objectives in the green zone apply to all prairie dog colonies in that zone, regardless of their habitat quality.

<u>Goal 1</u>

Contribute to recovery of the Utah prairie dog by establishing or augmenting Utah prairie dog colonies on federal lands across the species range.

<u>Objective to Achieve Goal 1</u>

a. Prior to any surface disturbing actions in the permit area, the developer may choose to wait for the Utah prairie dog translocation season (July 1-August 31) to have prairie dogs from the project site translocated to approved translocation sites (see section 5.1, Translocations).

    i. This objective applies to any size and any color colony in the green zone (see Figures 1 and 2).

<u>Goal 2</u>

Off-set unavoidable impacts to Utah prairie dogs from the covered activities by assisting with habitat and plague management of Utah prairie dog habitat on federal lands across the species range.

Objective to Achieve Goal 2

a. If the schedule for development does not allow translocations to occur (the translocation season is July 1-August 31), or there are no approved translocation sites available to receive prairie dogs, then mitigate impacts by helping to fund ongoing habitat and population conservation efforts for the Utah prairie dog (according to section 6.1, Mitigation Selection).

    i. This objective applies to any size and any color colony (see Figures 1 and 2).

2) Red Zone

Biological goals and objectives in the red zone are differentiated based on the quality of habitat (Appendix 1) and colony size associated with impacted prairie dog habitats.

Small Colonies (<50 prairie dogs 10-year mean spring count) on Low Quality Habitats

Goal 1

Contribute to recovery of the Utah prairie dog by establishing or augmenting Utah prairie dog colonies on federal lands across the species range.

Objective to Achieve Goal 1

a. Prior to any surface disturbing actions in the permit area, the developer may choose to wait for the Utah prairie dog translocation season (July 1 – August 31) to have Utah prairie dogs from the project site translocated to approved translocation sites (see section 5.1, Translocations).

    i. No large colonies (≥50 prairie dogs 10-year mean spring count) can be considered under this objective for the red zone regardless of habitat quality—this includes the mapped red or yellow colonies, but can also include unmapped habitats that support large colonies.

    ii. Blue or gray colonies, and unmapped occupied habitats with small colonies (<50 prairie dogs 10-year mean spring count), must be assessed to determine habitat quality (see Figures 1 and 2; Appendix 1) and objectives accordingly applied. Only low quality habitats may be considered under this objective for the red zone.

Goal 2

Off-set unavoidable impacts to Utah prairie dogs from the covered activities by assisting with habitat and plague management of Utah prairie dog habitat on federal lands across the species range.

Objective to Achieve Goal 2

a. If the schedule for development does not allow translocations to occur (the translocation season is July 1-August 31), or there are no approved translocation sites available to receive prairie dogs, then mitigate by helping to fund ongoing habitat and population conservation efforts for the Utah prairie dog (according to section 6.1, Mitigation Selection).

    i. No large colonies (≥50 prairie dogs 10-year mean count) can be considered under this objective for the red zone regardless of habitat quality—this includes the mapped red or yellow colonies, but can also include unmapped habitats that support large colonies.

    ii. Blue or gray colonies, and unmapped occupied habitats with small colonies (<50 prairie dogs 10-year mean spring count), must be assessed to determine habitat quality (see Figures 1 and 2; Appendix 1) and objectives accordingly applied. Only low quality habitats may be considered under this objective for the red zone.

Large Colonies, Medium Quality, and High Quality Occupied Habitats

Goal 3

Contribute to recovery of the Utah prairie dog by ensuring adequate mitigation for the loss of large colonies (≥50 prairie dogs 10-year mean count), medium quality, or high quality Utah prairie dog occupied habitats.

Objective to Achieve Goal 3

a. Impacts to any large colonies (≥50 prairie dogs 10-year mean spring count), medium quality, and high quality occupied habitats (Appendix 1), will be mitigated by purchasing credits from available conservation banks or providing similar monetary compensation if conservation banks are unavailable (see section 6.1, Mitigation Selection).

    i. All red and yellow colonies fall under this objective for the red zone (see Figures 1 and 2).

ii. Blue or gray colonies must be assessed to determine habitat quality (see Figures 1 and 2; Appendix 1) and objectives accordingly applied.

iii. As previously described, any unmapped occupied habitat would be assessed to determine their population size and habitat quality (Appendix 1), and objectives accordingly applied.

AVOIDANCE AND MINIMIZATION MEASURES

Conserving Large, Medium Quality, and High Quality Occupied Habitats

This HCP will avoid impacts to large (>50 animals 10-year mean spring count), medium quality, and high quality (Appendix 1) habitats in the red zone, unless these habitats are properly mitigated (see section 6.1, Mitigation Selection). Mitigation of large, medium quality, and high quality habitats in the red zone will include the purchase of credits from available conservation banks or the provision of a similar monetary compensation if conservation banks are unavailable (see section 6.1, Mitigation Selection).

Translocations

Translocations of Utah prairie dogs are used to increase the numbers of prairie dog colonies in new locations across the species' range. Translocation efforts have improved across the years and the methodology plays an important role in Utah prairie dog recovery, including establishment of new colonies and facilitating gene flow (USFWS 2012). Thus, translocations are considered as part of the conservation strategy of this HCP to minimize potential development impacts (see section 4.1, Biological Goals and Objectives, above), and contribute to recovery of the species. Incidental take can occur when permanent structures are developed in or adjacent to occupied prairie dog colonies, and vehicles inadvertently run over prairie dogs, or habitat is removed. The translocations helps to minimize the loss of prairie dogs and their habitats from developed areas by establishing new colonies on other, protected habitats, while also contributing to long-term recovery of the species.

Translocations of Utah prairie dogs will be used as a minimization measure when the schedule of development allows for the translocation of Utah prairie dogs from the site. The decision to use translocation as a minimization measure is left up to the developer, as described below.

Translocations can be used for all occupied habitats within the green zone and only for low quality occupied habitats (those that have <50 animals, 10-year mean spring count) in the red zone, as follows (also see Table 2):

1) Green Zone – all occupied habitats

   or

   Red Zone – small colonies (those that have <50 animals, 10-year mean spring count) on low quality occupied habitats

   a. If the developer chooses to allow translocation of animals from the site prior to construction (see section 6.1, Mitigation Selections), he/she must wait until the translocation season (July 1-August 31). After translocations are completed, development must begin prior to the next Utah prairie dog breeding season (prior to the following February 1) to minimize the potential for a large number of Utah prairie dogs to reoccupy the site. This gives the developer six months to begin construction.

      i. If development has not proceeded, the developer will need to either 1) wait for the next translocation season, or 2) pay the $1,000/acre mitigation fee (see section 6.1, Mitigation Selection).

   b. If the developer does not want to wait for the translocation season, or if translocation sites are not available, then mitigation will be required (see section 6.1, Mitigation Selection).

2) Red Zone – large colonies (≥50 animals 10-year mean spring count), medium quality, and high quality Occupied Habitats

   a. If the developer chooses to allow translocation of animals from the site, he/she will be helping to support recovery efforts as described above. However, mitigation of these large, medium quality, and high quality occupied habitats will also be required (see section 6.1, Mitigation Selection).

Translocations will be carried out according to approved USFWS Translocation Guidance (USFWS 2012). In this way, every possible effort will be made to ensure the survival of live-trapped Utah prairie dogs, and the establishment of new, viable colonies, by moving them to approved translocation sites. Based on availability, the UDWR and/or Iron County Technicians (hired under the 1998 Iron County HCP) can undertake the prairie dog translocation responsibilities associated with this HCP.

The translocations help to minimize the loss of prairie dogs and their habitats from developed areas by establishing new colonies on other, protected habitats, while also contributing to long-term recovery of the species. In this case, translocations will also help manage conflicts between the residents of Iron County and Utah prairie dogs. The County has expressed concerns regarding the conflicts between development needs and the presence of Utah prairie dogs in the communities. Ultimately, to achieve recovery, we will need to create incentives for private landowners and local communities to participate in prairie dog habitat improvement and protection measures. We can achieve this only if we demonstrate that the benefits of prairie dog conservation outweigh the costs to the landowner and communities, and if solutions that address

landowner concerns and opposition are available when needed (Elmore and Messmer 2006; 77 FR 46173-46174). Our recent experiences show that if we are mindful of landowner, community, and safety needs, and if we provide solutions where Utah prairie dogs conflict with certain human land uses or create serious safety hazards, we can improve landowner and local community support for the species' conservation (Elmore and Messmer 2006; 77 FR 46173-46174, August 2, 2012). The resolution of such conflicts will reduce community resistance and help gain support for efforts to recover the species.

MITIGATION PLAN

Iron County coordinated with the USFWS in an effort to identify immediate threats to the species resulting from ongoing residential and commercial development, and mitigate those threats. This allows the County to operate as desired but will also provide needed Utah prairie dog conservation measures.

Because of the high percentage of Utah prairie dogs on non-Federal lands and threat of habitat loss to development, the USFWS Final Revised Utah Prairie Dog Recovery Plan (USFWS 2012) recommends a two-tier approach for recovery—1) continued habitat restoration and management of prairie dogs on federal lands, and 2) protection of some of the existing Utah prairie dog colonies on non-federal lands through fee title purchases, conservation easements, and conservation banks. Thus, the primary mitigation strategy of this HCP is also two-fold and seeks to 1) provide funding to conduct habitat restoration and population management on federal lands, and 2) protect in perpetuity occupied Utah prairie dog habitats that are on non-federal, unprotected lands, through the use of conservation banks.

Mitigation Selection

As described above (see section 4.1, Biological Goals and Objectives), conservation banks or the payment of mitigation fees to the NFWF Utah Prairie Dog Conservation Fund (Iron County subaccount) will be completed when: 1) translocations are not feasible prior to development or 2) for any large (≥50 Utah prairie dogs 10-year mean count), medium quality, or high quality occupied habitats in the red zone, at the following rates (Table 2):

1) Translocations are the primary minimization strategy for green zone occupied habitats and red zone low quality occupied habitats (where the colony has <50 animals, 10-year mean spring count). However, if the developer chooses to develop outside of the translocation window, then a mitigation fee will be paid to NFWF as follows:

   Green Zone – all occupied habitats

   or

   Red Zone – small colonies (<50 prairie dogs, 10-year mean spring count) on low quality habitats:

a. A mitigation payment of $1,000/acre will be paid to the NFWF Utah Prairie Dog Conservation Fund, Iron County subaccount.

b. The County, USFWS, and NFWF will enter into an MOA stating the process for selecting Utah prairie dog conservation projects for which the Iron County subaccount funds will be used. The MOA will be completed prior to completion of the HCP. Conservation projects may include habitat restoration, establishment of translocation sites, and plague dusting/vaccine application, primarily on federal lands. The type of selected projects will be consistent with recovery actions by the March 2012 Utah Prairie Dog Revised Recovery Plan for the Utah Prairie Dog (USFWS 2012).

2) Red Zone – for all large colonies (≥50 prairie dogs 10-year mean spring count), medium quality, and high quality occupied habitats (Appendix 1):

a. The loss of habitat will be mitigated through the purchase of credits from existing conservation banks, using the conservation bank's mitigation ratios and fee structure.

b. If conservation banks are unavailable, a payment based on of similar fee structures of recent conservation banks will be made to the NFWF Iron County subaccount. This funding will be sufficient to purchase replacement habitats, and provide an endowment fee to a managing entity. Current payment fee structures for existing conservation banks are[3]:

i. Impacts to medium quality habitats - $6,400/acre

ii. Impacts to high quality habitats - $8,000/acre

c. The County, USFWS, and NFWF will enter into an MOA stating the process for selecting Utah prairie dog conservation projects for which the Iron County subaccount funds will be used. The MOA will be completed prior to completion of the HCP. Conservation projects may include habitat restoration, establishment of translocation sites, and plague dusting/vaccine application. The USFWS and County would prioritize funds to purchase or place perpetual conservation easements on non-federal lands (where willing sellers are available) in Iron County. These types of projects are identified as recovery actions by the March 2012 Utah Prairie Dog Revised Recovery Plan for the Utah Prairie Dog (USFWS 2012).

[3] If average fees paid to the most recent conservation banks change, then the fee structure associated with this HCP will change to ensure consistency.

Table 2. Utah Prairie Dog Minimization and Mitigation Measures

Zone	Occupied Habitat Quality	Minimization Strategy	Mitigation Strategy
Green Zone	All Occupied Habitat	Translocations	$1,000 per acre to NFWF conservation fund if translocations are not conducted prior to development
Red Zone	Low Quality, Small Colonies (<50 prairie dogs 10-year mean spring count)	Translocations	$1,000 per acre to NFWF conservation fund if translocations are not conducted prior to development
	Medium Quality	Translocations voluntary, but mitigation still required.	Purchase credits from conservation bank
	High Quality	Translocations voluntary, but mitigation still required.	Purchase credits from conservation bank
	Large Colonies (≥50 prairie dogs 10-year mean spring count	Translocations voluntary, but mitigation still required.	Purchase credits from conservation bank

Mitigation Benefits

The majority of prairie dog habitats within the green zone associated with this HCP are in already developed landscapes that support a variety of residential and commercial developments and associated infrastructure. The remaining prairie dog populations are remnants of larger colonies that used to occupy more natural habitats, but are now somewhat isolated and do not serve to support current or future metapopulations and recovery objectives for the species. As such, the primary strategy of this HCP in the green zone is to minimize impacts by translocating these prairie dogs to federal or other protected habitats where they can contribute to recovery. Translocations of prairie dogs to federal lands or the use of funds for conservation projects benefits the Utah prairie dog by helping to establish and expand colonies on protected habitats for the long-term, thus meeting recovery objectives and actions (USFWS 2012).

If translocations cannot be scheduled to occur prior to development of occupied habitats in the green zone, then a payment of $1,000 per acre will be made to the NFWF Utah Prairie Dog Conservation Fund. These funds will be used to assist with recovery actions on federal and other protected habitats, through projects such as habitat restoration and plague management.

Large colonies (≥50 prairie dogs, 10-year mean spring county), and high and medium quality occupied Utah prairie dog habitats within the red zone, will be mitigated through the use of conservation banks or the provision of equitable funding to the NFWF Utah Prairie Dog Conservation Fund. The funding deposited to the NFWF Utah Prairie Dog Conservation Fund

for these habitat types will be prioritized for the purchase or placement of perpetual conservation easements on lands with willing sellers.

The amount of credits to be purchased from conservation banks, or funding provided to the NFWF conservation fund is determined based on the quality of habitat impacted by a proposed development. Purchase of credits from conservation banks would be at the rates set by the specific bank, which generally use mitigation ratios that are greater than 1:1 for permanent impacts to medium and high quality Utah prairie dog habitats (see section 6.1, Mitigation Selection). If the NFWF conservation fund is used rather than a mitigation bank, the fees paid to the bank are similarly calculated such that more habitats can be purchased and managed for prairie dog conservation in perpetuity than that which was lost to development (see section 6.1, Mitigation Selection). This ensures that even though there is a loss of habitat at the development site, that the impacts are fully offset with the protection in perpetuity of more habitat than is lost. The benefit of this type of mitigation is that conservation banks and other habitat protections provides for the protection of otherwise developable Utah prairie dog habitats in perpetuity, meeting a key recovery objective of the Revised Utah Prairie Dog Recovery Plan – to protect existing colonies on non-federal lands.

BIOLOGICAL INFORMATION AND SPECIES STATUS

Updated biological information and status of the Utah prairie dog is presented in the USFWS March 2012 Revised Utah Prairie Dog Recovery Plan, and referenced here in its entirety (USFWS 2012).

STATUS OF THE SPECIES IN THE PERMIT AREA

Utah Prairie Dog Distribution

Utah prairie dogs have been counted and mapped in the permit area since 1976. As previously described (see section 2.4, Permit Area), mapped Utah prairie dog habitat is defined as all areas within the species' range that were identified and delineated as being occupied by Utah prairie dogs in any year since 1976. These areas may or may not be occupied by prairie dogs in any given year.

The permit area has 6,802 ac (2,753 ha) of mapped Utah prairie dog habitat (see Table 1). By comparison, there are 16,841 ac (6,815 ha) of mapped Utah prairie dog habitat in the West Desert Recovery Unit and 59,656 ac (24,142 ha) of mapped Utah prairie dog habitat rangewide.

The UDWR has conducted spring counts of all accessible Utah prairie dog colonies in Iron County (including the permit area) since 1976. Counts are conducted in the spring between April 1 and June 1, before the young are above ground, by following the Survey Protocol for Annual Counts (USFWS 2012). Spring counts are multiplied by two to estimate the adult population. Spring counts provide information on long-term population trends, but are not accurate enough to provide actual population numbers. Spring counts for the last 5 years in the West Desert Recovery Unit average 4,579 prairie dogs (Table 3), or 9,159 adult prairie dogs. Spring counts for the last 5 years in the permit area average 3,334 prairie dogs (Table 4), or 6,668 adult prairie dogs. The average density of prairie dogs in the permit area is 1.78 prairie dogs per acre.

Table 3. Numbers of Utah Prairie Dogs in the West Desert Recovery Unit

2008	2009	2010	2011	2012	5-YEAR AVERAGE
3959	4065	4199	4997	5678	4579

Table 4. Numbers of Utah Prairie Dogs in Take Zones

	2008	2009	2010	2011	2012	5-YEAR AVERAGE
Within Green Boundary	1588	1614	1499	1704	2296	1740
Red Boundary (but outside green boundary)	1273	1504	1585	1614	1992	1594
TOTAL	2861	3118	3084	3318	4288	3334

Vegetation

The permit area includes areas that are already either built out or zoned as residential and commercial development, particularly within the green boundary identified in Figures 1 and 2. Mixed agriculture and rangeland habitats are part of the landscape, particularly within the red boundary (but outside the green boundary) identified in Figures 1 and 2. These vegetation communities include sagebrush, grasslands, pinyon-juniper, and agricultural fields. The entire permit area is anticipated by the County to be converted to residential and commercial development in the near future.

Soils

A variety of soil types and complexes exist within Iron County and the permit area. Primarily the soil types and complexes include loam, sandy loam, clay loam, silty clay, silty clay loam, and cobbly loam (http://websoilsurvey.sc.egov.usda.gov).

Wildlife

There are a multitude of species that may on occasion occupy the properties within the permit area. Some of the more common species include: American badger (*Taxidea taxus*), American kestrel (*Falco sparverius*), black-tailed jackrabbit (*Lepus californicus*), Botta's pocket gopher (*Thomomys bottae*), coyote (*Canis latrans*), desert cottontail rabbit (*Sylvilagus audubonii*), desert mule deer (*Odocoileus hemionus crooki*), golden eagle (*Aquila chrysaetos*), horned lark (*Eremophila alpestris*), long-tailed weasel (*Mustela frenata*), mourning dove, northern goshawk (*Accipiter gentiles*), red-tailed hawk (*Buteo jamaicensis*), rock squirrel (*Spermophilus variegatus*), sage thrasher (*Oreoscoptes montanus*), sage sparrow (*Amphispiza belli*), (*Zenaida macroura*), striped skunk (*Mephitis mephitis*), western meadowlark (*Sturnella neglecta*), burrowing owl (*Speotyto cunicularia*), western rattlesnake (*Crotalus viridis*), and gopher snake (*Pituophis melanoleucus*).

EFFECTS TO UTAH PRAIRIE DOGS

The impacts and effects to Utah prairie dogs are described here first, without consideration for the mitigation measures that would be implemented under this HCP. This is to ensure that we fully analyze the impacts to the species and ensure that the species will not be jeopardized by our actions. Following our impact analysis, we then consider how other minimization and mitigation measures provide additional conservation and support our conclusion that the HCP will provide a net conservation benefit and contribute to the recovery of the Utah prairie dog.

Overall Impacts to Utah Prairie Dogs

Impacts to Utah prairie dogs and their habitats can be described as permanent or temporary. Permanent impacts include those that result in the complete loss of habitat from activities such as the development of buildings, roads, and infrastructure. These developments result in the complete loss of habitat such that prairie dogs can no longer utilize the site. For purposes of this HCP, we assume that covered activities will result in a complete loss of up to 600 acres of occupied Utah prairie dog habitats within the permit area (see Figure 1).

The distance at which disturbance affects a prairie dog's normal behavior is approximately 350 feet (106.7 meters) (Ashdown, 1995). Thus, we can assume that human activities including the construction and use of facilities within 350 feet (106.76 m) of prairie dog colonies may cause prairie dogs to leave an area or may result in behavioral changes such as reduced aboveground foraging time. However, Utah prairie dogs are somewhat acclimated to human disturbances in much of Iron County as evidenced by their occupation adjacent to existing structures. Thus, it is unlikely that human presence will result in the complete loss of prairie dogs from the permit area.

In general, the presence of construction operations also has the potential to increase the spread of invasive weeds following ground disturbance in and around the project area, and increase the amount of trash left in the area. Invasive weeds may result in a lower overall quality of forage for the Utah prairie dog in some areas. Some trash materials may contain toxic substances to Utah prairie dogs, and ingestion of plastics can cause injury or mortality. Increased human use of areas may increase the potential for illegal shooting of prairie dogs, or an increased presence of domestic dogs and cats that can injure or kill prairie dogs.

In addition, Utah prairie dogs may be translocated from the affected occupied habitats as part of the conservation measures associated with this HCP. These prairie dogs will be moved to translocation sites on federal or other protected lands. Some of these prairie dogs may be injured or killed during translocation efforts or may die shortly after release at the translocation site. Despite translocation-induced mortalities, translocations of prairie dogs to federal or other protected lands is an important component of the recovery strategy for the Utah prairie dog (USFWS 2012), with the goal of establishing new, persistent Utah prairie colonies in areas where they can be conserved.

Specific Impacts to Utah Prairie Dogs and their Conservation

As previously described (see sections 2.4, Permit Area; 8.1 Utah Prairie Dog Distribution), this HCP proposes to authorize incidental take of Utah prairie dogs from residential and commercial development within a 97,172 ac (39,324 ha) permit area. There are 6,802 ac (2,753 ha) of mapped Utah prairie dog habitat within the permit area, an average annual spring count of 3,334 animals (or 6,668 adult prairie dogs) over the last 5 years (see Table 4), and an average prairie dog density of 1.78 prairie dogs per acre. There was an average annual spring count of 4,579 prairie dogs in the West Desert Recovery Unit (5-year average), equating to an average of 9,158 adult prairie dogs.

Using these figures, we can anticipate that the loss of 200 ac (81 ha) of occupied habitat per year could result in the loss of 356 adult prairie dogs per year—5.3 percent of the overall adult population (5-year average) in the permit area and 3.9 percent of the overall adult population (5-year average) in the West Desert Recovery Unit (see Table 3). This is considered a relatively small percentage of the overall Utah prairie dog population. In addition, despite the loss of these colonies and occupied habitat, the overall effects to the species are not considered significant based on the following factors:

1) Permit Area

a. The take in this HCP is limited to 200 ac (81 ha) of occupied Utah prairie dog habitat per year for no more than three years (see section 2.3, Permit Duration), for a maximum take of 600 ac (243 ha) of occupied Utah prairie dog habitat, or 11 percent of total mapped Utah prairie dog habitat in the permit area (see Table 1) and only 3.6 percent of the total mapped habitat in the West Desert Recovery Unit.

2) Green Zone

a. Many of the Utah prairie dog colonies within the green zone of the permit area (see Figures 1 and 2) already exist in an area of high residential and commercial development. They are essentially remnant populations that are somewhat isolated, but continue to persist in this highly developed environment despite high levels of human activity. Thus, they do not serve to support current or future metapopulations and objectives for recovery of the species in the wild.

b. Of the Utah prairie dog mapped habitat within the green zone, 64 percent of the colonies are small colonies, with 10-year mean spring counts of less than 19 animals compared to only 3 percent that are large colonies with more than 100 animals. Most of the small colonies would be considered low quality habitats because they are surrounded by development and thus have lost some or all of their connectivity to other prairie dog colonies in the West Desert Recovery Unit.

3) Red Zone

Many of the Utah prairie dog colonies within the red zone of the permit area exist on the outskirts of developing communities and still retain connectivity with prairie dog populations on federal or other protected lands. However:

a. This HCP does not authorize the take of occupied habitat or prairie dogs on the large colonies, medium quality, or high quality occupied habitats in the red zone. These are considered the most persistent colonies that contribute the most to long-term recovery objectives.

   i. There are 543 ac (220 ha), or 13 percent, of mapped habitat in the red zone that are considered large colonies, with ≥ 50 prairie dogs, 10-year mean spring count.

   ii. Of the smaller colonies, many may be considered medium or high quality habitats due to their location in relatively undeveloped locations (see Figures 1 and 2) and close proximity and connectivity with other prairie dog colonies on federal BLM lands. Regardless of colony size, medium quality or high quality habitats are not authorized for take in the red zone under this HCP. Individual habitat quality assessments will be required prior to development within the red zone, under this HCP.

   iii. Large colonies, medium quality, or high quality occupied habitats may continue to be taken under the 1998 Iron County HCP, as long as their loss is compensated through the available take and associated minimization and mitigation measures (e.g., translocations or $1,000/acre mitigation fee) or the use of conservation banks, as provided in that document.

In summary, the effects of this HCP on the Utah prairie dog are expected to be minor and negligible because 1) the size and scope of the take is relatively small, and limited to a maximum of 600 ac (243 ha), 2) most of the take is limited to already developed areas or those areas projected for development in the near future—these areas do not serve to support current or future metapopulations and objectives for recovery of the species in the wild, and 3) the take is primarily limited to small colonies in low quality habitats; the only large colonies or those with medium or high quality habitats that may be taken are those in areas that are already developed (i.e., green zone). Furthermore, although developers or landowners may incur take authorized by the County Commission approval process any time during the 99-year ITP term, the total amount of take under this HCP is capped at a maximum of 600 acres. The long period allowed for the take to occur does not affect our determination that the maximum 600 acres of take confined to specified habitat quality and colony sizes in each zone would have minor or negligible effects on the metapopulation.

IMPLEMENTATION AND MONITORING

Upon issuance of the permit, the County will initiate establishment of an HCP Implementation Committee. This committee will be comprised of a representative from, at a minimum, the USFWS and Iron County. The HCP Implementation Committee will develop a process, whether consensus-based or majority vote, for making decisions and providing a conflict resolution process.

The Implementation Committee will meet annually to review progress and ensure all provisions of the HCP are being met. The Implementation Committee can also help guide translocation efforts and continually evaluate the effectiveness of other avoidance and minimization measures. The Implementation Committee may recommend improvements to avoidance and minimization measures, based on currently available science. Any additional conservation measures would be based upon mutual agreement with the County (see section 9.4.1, Changed Circumstances).

Biological Monitoring

Biological monitoring will not be required of the County under this short-term, low-effect HCP. Prairie dog translocations, habitat treatments, and plague management efforts will all be coordinated through the Utah Prairie Dog Recovery Implementation Program (UPDRIP) and Utah Prairie Dog Recovery Implementation Team (UPDRIT). The UPDRIP and UPDRIT partner members are comprised of federal, state, and local agencies with responsibilities to implement recovery actions on landownerships. For example, prairie dogs moved to sites on BLM or USFS lands will be monitored and managed by those land management agencies. Similarly, the actual establishment of translocation sites and any habitat restoration projects will be accomplished by those agencies. In addition, the federal land management agencies already monitor Utah prairie dog translocation sites and habitat restoration projects to ensure success.

Compliance Monitoring

To ensure compliance with the avoidance and minimization measures outlined in Section 8.0, an annual report will be submitted to the USFWS by Iron County (by February 15) with the following information:

a. Identification of each individual project where take occurred.
    i. Location of project.
    ii. Total area of project cleared.
    iii. Acreage of mapped habitat taken.
b. Occupied habitat taken
    i. Acreage of occupied habitat taken.
    ii. Habitat quality of occupied habitat taken – only for red zone.
c. Minimization measures used for each project where take occurred.
    i. Number of prairie dogs translocated.
    ii. Translocation site to which the prairie dogs where moved.
d. Mitigation measures used for each project where take occurred.
    i. Amount of credits purchased from conservation banks (and name of conservation bank) or funding provided to NFWF for each project.

As the Implementation Committee is established, and projects are initially tracked, there may be a need to add or subtract some of the above described components of the compliance monitoring information. The Implementation Committee will work together to develop an appropriate database which will be housed and managed with Iron County.

Adaptive Management

The goals of this low-effect HCP are to allow Iron County to proceed with residential and commercial development projects in the permit area, while minimizing and mitigating the associated impacts to the Utah prairie dog, and to serve as a bridge for take authorization until a rangewide or County-specific long-term HCP is completed. Avoidance, minimization, and mitigation measures are detailed in this HCP (sections 8.0 and 9.0, above) as prescriptions to ensure the continued conservation of the Utah prairie dog.

Adaptive management is a conservation planning strategy that, when implemented, is continuously updated with monitoring information to ensure that the biological goals and objectives of the HCP are being achieved. Because this is a low-effect HCP, and at most extends for no more than three years, we do not anticipate the need for adaptive management.

In addition, as described in section 10.2, above any adaptive management associated with translocations and habitat restoration on federal lands would be the responsibility of the respective federal land management agencies, working as partners under the UPDRIP and UPDRIT teams.

Changed and Unforeseen Circumstances

Section 10 regulations (50 CFR 17.22(b)(2)(iii)) require that an HCP specify the procedures to be used for dealing with unforeseen circumstances that may arise during the implementation of the HCP. In addition, the HCP Assurances ("No Surprises") Rule (50 CFR 17.21(b)(5-6) and 17.22 (b)(5-6); 63 FR 8859) defines "unforeseen" circumstances and "changed circumstances" and describes the obligations of the Permittee (i.e., County) and USFWS. The purpose of the No Surprises Rule is to provide assurance to the County, under the ESA, that no additional land restrictions or financial compensation will be required for species in the permit area, as adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the County.

Changed Circumstances

The ESA's implementing regulations define "changed circumstances" as "changes in circumstances affecting a species or geographical area covered by a conservation plan or agreement that can reasonably be anticipated by plan or agreement developers and the Service and that can be planned for" (50 CFR § 17.3). In developing this HCP, the County and USFWS identified the potential "changed circumstances" that can reasonably be anticipated to affect the covered species and plan area, and have agreed upon the County's responsibility under this HCP to implement conservation and mitigation measures to address such changed circumstances should they occur during the term of this HCP. The reasonably anticipated changed circumstances, and the County's obligations connected thereto, are as follows:

1) Epizootic plague outbreaks

Plague is one of the primary threats to the Utah prairie dog (USFWS 2012). Plague outbreaks may make some or all of the translocation sites unusable for a portion or all of the HCP planning period. If plague makes translocation sites unavailable, then the HCP Implementation Committee will work together and with the partner land management agencies to develop new translocation sites. If translocation sites are unavailable, then that minimization measure will no longer be implemented, and the mitigation strategy requiring a $1,000/acre fee will be implemented for all residential and commercial development. However, there has not been a complete lack of translocation sites for over 30 years of implementation of the 1998 Iron County HCP, so we do not anticipate a high probability for this changed circumstance to occur during the 2-3 year timeframe of this HCP.

2) Fire or drought

Fire or drought could render some or all available translocation sites unusable. If this occurs, the HCP Implementation Committee will work together and with the partner land management agencies to develop new translocation sites. If translocation sites are unavailable, then that minimization measure will no longer be implemented, and the mitigation strategy requiring a $1,000/acre fee will be implemented for all residential and commercial development. However, there has not been a complete lack of translocation sites for over 30 years of implementation of

the 1998 Iron County HCP, so we do not anticipate a high probability for this changed circumstance to occur during the 2-3 year timeframe of this HCP.

3) Change to endangered status (Utah prairie dog), or listing of a new species in the permit area

Administrative changed circumstances include a change in the status of the Utah prairie dog or the listing of a new species or critical habitat. If the Utah prairie dog's status is changed to endangered, or if critical habitat is designated, the incidental take permit will be reevaluated by the USFWS and the HCP covered activities may be modified, as necessary, to ensure that activities covered under the HCP are not likely to jeopardize or result in take of the species or adverse modification of any designated critical habitat. Similarly, this evaluation would occur if a new species within the permit area is listed during the term of this HCP. If such a listing occurs during the term of this HCP, the need to cover it under the incidental take permit would be evaluated, and the HCP would be amended to incorporate appropriate avoidance, minimization, and mitigation measures, if necessary.

Iron County will implement the modifications to the HCP covered activities, as identified in coordination with the USFWS, as necessary to avoid the likelihood of jeopardy or adverse modification of critical habitat of an up-listed (i.e., endangered) Utah prairie dog, or a newly listed species. Iron County will continue to implement such modifications until such time as the the County applies for and the USFWS approves an amendment of the incidental take permit associated with this HCP, in accordance with applicable statutory and regulatory requirements to cover the newly listed species; or until the USFWS notifies Iron County in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy or adverse modification of critical habitat of the newly listed species

So long as the terms of this HCP, Implementing Agreement, and Incidental Take Permit (ITP) are being properly implemented, the USFWS will not require any mitigation, conservation measures, or funding in addition to the measures and funding specified in sections 5.0 and 6.0 of this HCP to address changed circumstances. Other than the "changed circumstances" specifically identified in this section, all other changes in circumstances affecting covered species shall be deemed "unforeseen circumstances," as described below.

Unforeseen Circumstances

The HCP policy defines unforeseen circumstances as changes in circumstances that affect a species or geographic area covered by the HCP that could not reasonably be anticipated by plan developers and the USFWS at the time of the plan's negotiations and development, and that result in a substantial and adverse change in status of a covered species. The purpose of the "No Surprises" rule is to provide assurances to non-federal landowners participating in the HCP that no additional land restrictions or financial compensation will be required for species (in the HCP permit area) adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the County.

In case of an unforeseen event, the USFWS shall have the burden of demonstrating that an unforeseen circumstance has occurred and that such circumstance is having or is likely to have a significant adverse impact on the covered species or its habitat. The findings of the USFWS

must be clearly documented and be based upon the best scientific and commercial data available regarding the status and habitat requirements of the species. Based on the results of the analysis of the changed or unforeseen circumstances, the USFWS shall provide the justification and approval of any reallocation of funds or resources necessary to respond to the circumstance within the existing commitments of the County under the HCP.

The USFWS will determine that an unforeseen circumstance has occurred by evaluating factors such as, 1) the size of the current range of the Utah prairie dog, 2) percentage of range conserved by the HCP, 3) percentage of range adversely affected by the unforeseen circumstance, 4) the ecological significance of the portion of the range covered by the HCP, 5) the level of knowledge of the affected species or habitat, and 6) whether failure to adopt additional conservation measures would significantly reduce the likelihood of survival and recovery of the species in the wild. Any party to the HCP Implementation Agreement may request the Implementation Committee to meet to discuss appropriate amendments to the HCP, if needed to address any unforeseen circumstances.

In implementing the "No Surprises" rule, Congress intended that additional mitigation requirements should not be imposed on a section 10(a)(1)(B) County in the event of unforeseen circumstances. If the USFWS determines that an unforeseen circumstance has occurred and additional conservation measures are deemed necessary to ensure the species' conservation, the obligation for such measures shall not rest with the County, as long as the HCP is properly functioning. The USFWS agrees that it will consider all practical measures and alternatives, and adopt only those that will have the least effect and impact on the lifestyle and economy of Iron County, while at the same time addressing the unforeseen circumstance and the survival and recovery of the Utah prairie dog and its habitat.

Modifications and Amendment Procedures

Modifications to this HCP may occur during the life of the plan. Proposed modifications must be supported by sufficient and sound reasoning. "Minor" modifications to the HCP may be proposed at the discretion of, and by unanimous vote of, the Implementation committee (as described in Section 8). Minor modifications are defined as routine administrative revisions or changes to the operation and management program that do not diminish the level or means of mitigation. Minor modifications may not cause a net loss of mitigation area, alter the effectiveness of the HCP, alter the terms of the ITP, or alter or add impacts that were not previously analyzed in the NEPA analysis or Section 7 consultation. Upon written request of the County, the USFWS will review and approve proposed minor modifications to the HCP as long as they meet the requirements described above.

"Major" modifications to this HCP can be proposed to the USFWS by any signatory to the HCP and may require an amendment to the permit, such as adding a covered species, changing covered activities or covered area. A major modification and/or amendment to the permit may also require additional analyses and public review. Proposed "major" modifications will be

reviewed by the Implementation Committee and comments regarding these will be provided to the USFWS, which will have final approval authority. The USFWS will determine whether the proposed amendment is considered “minor” or “major,” based on the need for public review and compliance with applicable laws.

PERMIT REVOCATION

Enforcement

The provisions of this HCP are enforceable through the terms and conditions of the permits issued by the USFWS.

Suspension

The USFWS may suspend all or part of the privileges authorized by an ITP, pursuant to the provisions of 50 CFR § 13.27, if the County does not comply with the conditions of the ITP or with any applicable Federal laws or regulations governing the conduct of the permitted/covered activity. Prior to proposing any suspension of a permit implementing this HCP, the USFWS will meet and confer informally with the County in an effort to resolve any grounds for concern. If these attempts at informal resolution are unsuccessful, the USFWS will then follow the provisions of 50 CFR § 13.27 prior to making a final decision to suspend the permit(s). A suspension shall remain in effect until the USFWS determines the County has corrected the deficiencies.

A partial suspension of an ITP may apply to only a portion of the permit coverage area or permitted/covered activities. In the event of a partial suspension, the portion of the ITP not subject to the suspension shall remain in full force and effect. The ITP for the portion of the area not subject to suspension shall remain in full force and effect, and shall be unaffected by any such permit suspension procedures.

Revocation

The USFWS shall not revoke the ITPs for any reason except those listed in 50 CFR § 13.28(a)(1)- (4), or unless the permitted/covered activities would be inconsistent with the criteria set forth in 16 USC § 1539(a)(2)(B)(iv), and the inconsistency has not been remedied in a timely fashion. Prior to proposing any ITP revocation, the USFWS will meet and confer informally with the County in an effort to resolve any grounds for concern. If these attempts at informal resolution are unsuccessful, the USFWS will then follow the provisions of 50 CFR § 13.28 prior to making a final decision to revoke. An ITP will only be revoked if the USFWS and the County have not been successful in remedying the causes for revocation through other means.

A partial revocation of an ITP may apply to only a portion of the permit coverage area or permitted/covered activities. In the event of a partial revocation, the portion of the ITP not

subject to the revocation shall remain in full force and effect. The ITP of the remaining areas shall remain in full force and effect and be unaffected by any such revocation.

Incidental take coverage and ESA compliance for covered activities that have been conducted pursuant to the implementation and mitigation measures in this HCP shall continue and be unaffected in the event of any subsequent revocation of an ITP. In the event of any such revocation, no additional commitments shall be required by the County unless it is necessary to mitigate for the take of covered species that occurred pursuant to the terms of the ITP before its revocation, as determined by the USFWS in collaboration with the County.

Withdrawal of Participation

At any time during the term of this HCP and ITPs, the County may choose to discontinue its participation in this HCP as to: a) the covered species; b) a portion of the permit coverage area; and/or c) one or more of the permitted/covered activities. ESA compliance for covered activities that have been implemented pursuant to the mitigation measures in this HCP shall continue and be unaffected by any subsequent termination of the HCP provided there are no outstanding mitigation requirements associated with those activities.

ASSURED FUNDING

Costs associated with this HCP include costs of technicians or County employees to conduct habitat quality assessments for occupied Utah prairie dog habitat in the red zone. There will also be administrative costs associated with maintaining a compliance tracking database. The County is responsible for the full costs of these activities, which can be accommodated through the use of existing staff resources. The County has funded the Iron County Technicians and administrative costs associated with the 1998 Iron County HCP since 1998. Because this low-effect HCP overlaps that of the ongoing 1998 Iron County HCP, we can reasonably expect that the same staff resources and costs associated with the 1998 Iron County HCP will be sufficient to implement this low-effect HCP. Therefore, no additional funding specific to this low-effect HCP is needed.

Any mitigation requirements will be paid for by the individual developers who request a building permit or coverage under this HCP. County issuance of a building permit will be contingent on the payment of the mitigation fees by the developer before development is initiated. For building permits that have been issued prior to issuance of the ITP, the County will work with the developer to ensure payment of relevant mitigation fees. Failure of payment by the developer before initiation of development would result in the County suspending or revoking the building permit. Therefore, no additional funding for mitigation is required under this HCP.

ALTERNATIVES CONSIDERED

Alternative #1: No Action

Under the No Action alternative, no additional take would be authorized for developers in Iron County. Take authorization for residential and commercial development in occupied Utah prairie dog habitat in Iron County would continue under authority of the 1998 Iron County HCP. As previously described (see section 1.1, Purpose and Need), the 1998 Iron County HCP and associated permit remain in effect (expires in 2018), but underestimated the amount of incidental take now anticipated to result from ongoing development in the County. Therefore, additional take authorization is needed to meet the ongoing development needs of the County.

Alternative #2: Long-Term, Rangewide HCP

Under this alternative, any additional take authorization beyond that in the Iron County HCP would be addressed in a long-term, rangewide HCP. The long-term rangewide HCP would authorize a much greater acreage of take of occupied Utah prairie dog habitat because it would include development projections for the next 20-30 years across at least three counties. As previously described (see section 1.1, Purpose and Need), the USFWS and Iron County began work on a Rangewide HCP (to include Iron, Garfield, and Wayne Counties) in 2006, however efforts to complete the Rangewide HCP have stalled due largely to concerns regarding funding mechanisms. Iron County has committed to proceed with completing either the Rangewide or a new long-term Iron County HCP. However it is likely that completion of a new HCP will require 2-3 years. In the interim, additional take authorization is needed to meet the ongoing development needs of the county.

Alternative #3 Proposed Action

Under the Proposed Action alternative, the County would receive the ability to authorize an additional 200 ac (81 ha) per year take of occupied Utah prairie dog habitat to residential and commercial developers with the take zones prescribed by this HCP (see Figures 1 and 2), and for a period of no more than three years. This low-effect HCP can be completed in a relatively short amount of time, alleviating development pressures in the interim, as a bridge to a longer term HCP. Iron County has also committed to proceed with completing either the Rangewide or a new long-term Iron County HCP. The take of 200 ac (81 ha) per year is considered a minor and negligible impact to the Utah prairie dog based on the amount and habitat quality associated with the take (see section 9.2, Specific Impacts to Utah Prairie Dogs and their Conservation). Avoidance, minimization, and mitigation measures in the HCP are intended to assist with the long-term recovery of the Utah prairie dog (see section 5.0, Avoidance and Minimization Measures and 6.0, Mitigation Plan). Therefore, the Proposed Action is the preferred alternative.

REFERENCES

Ashdown, 1. 1995. Visitor impact on avoidance responses in Utah prairie dogs *(Cynomys parvid.ens)* in Bryce Canyon National Park. Unpub!. Rept., Weber State University, Ogden, Utah. 19 pp.

Elmore, R.D., and T.A. Messmer. 2006b. Public perceptions regarding the Utah Prairie Dog and its management: Implications for species recovery. Berryman Institute Publication No. 23. Utah State University, Logan, UT. 16 pp.

U.S. Fish and Wildlife Service. 2012. Utah Prairie Dog *(Cynomys parvidens)* Revised Recovery Plan. U.S. Fish and Wildlife Service, Denver, CO. 169 pp.

APPENDIX 1. HABITAT QUALITY

UTAH PRAIRIE DOG HABITAT QUALITY WORKSHEET - IMPACTED SITES

Factor	Criteria	Value	Priority
HABITAT QUALITY			
Species Richness	species richness = 10, 3 grass, 3 forb	0	L
	Species Richness >10, 3 grass, 3 forb	1	M
	Species Richness >20, 6 grass, 6 forb	2	H
Average shrub canopy cover	average shrub canopy cover >20%	0	L
	average shrub canopy cover 11-20%	1	M
	average shrub canopy cover 0-10%	2	H
% Ground Cover	% Ground cover 0-20	0	L
	% Ground cover 20-60	1	M
	% Ground cover 60-100	2	H
Moisture rich vegetation	None	0	L
	300-1000m	1	M
	<300m	2	H
LANDSCAPE CONTEXT			
Landscape Location	>2 km dispersal distances to other colony	0	L
	1 -2 km dispersal distances to other colony	1.5	M
	≤ 1 km dispersal distance to other colony	4	H
	4 sides barred to dispersal (w/in 2 km)	0	L
	3 sides barred to dispersal (w/in 2 km)	1.5	M
	0-2 sides barred to dispersal (w/in 2 km)	4	H
POPULATION			
Persistence	unknown or occupied <6 of 10 years	0	L
	occupied 6-10 years	1	M
	occupied consistently for 10 years (or more)	2	H
Population size	1 - 10 UPD	0	L
	11 - 40 UPD	1	M
	> 40 UPD	2	H
TOTAL VALUE			
Maximum Value = 20			
Total Value / 20			
Low Value = <0.5			
Medium Value = 0.5 - 0.74			
High Value = >0.75			