U.S. Fish & Wildlife Service

NEWS RELEASE

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CANDIDATE CONSERVATION AGREEMENT WILL BENEFIT SOUTHERN IDAHO GROUND SQUIRRELS

The U.S. Fish and Wildlife Service (Service) has entered into a Candidate Conservation Agreement with Soulen Livestock Company, Idaho Department of Fish and Game, and the Governor's Office of Species Conservation to implement conservation measures for the southern Idaho ground squirrel. The ground squirrel, a federal candidate species, has experienced a significant decline in population throughout its range in southwestern Idaho in recent years.

Through the agreement, the parties will protect and enhance ground squirrel populations and habitat. Soulen Livestock will not allow shooting, trapping or poisoning of ground squirrels, and will allow agency personnel access to their property to conduct ground squirrel surveys, reintroductions and translocations. The Service issued a permit authorizing some impacts to southern Idaho ground squirrels as a result of Soulen Livestock's land use activities if the species is eventually listed under the Endangered Species Act (ESA). The conservation effort will occur over about 43,000 acres of Soulen Livestock's land in Washington and Payette Counties, Idaho, for the next 20 years.

Margaret Soulen, of the Soulen Livestock Company, stated, "We saw two benefits from this project. First, it was a good way to demonstrate how landowners can work with federal and state wildlife management agencies. We all need to do a better job of this. Second, through our agreement, the interest demonstrated by other landowners in similar agreements, and the increased interest in southern Idaho ground squirrels, we believe we can prevent the need to list the species as threatened or endangered. And that benefits everyone."

Bob Ruesink, Snake River Basin Office supervisor, agreed with Ms. Soulen, noting that, "Fish and wildlife conservation today requires strong partnerships across many boundaries. This work is accomplished in a wide range of geographic areas or habitat conditions with varied methods and results, but no one agency or landowner can do the job alone. Dedicated partners such as Soulen Livestock and the state agencies involved in this agreement can make serious strides toward species conservation. That is what we are striving for in Idaho today."

The southern Idaho ground squirrel was identified as a candidate for listing under the Endangered Species Act in October, 2001. Southern Idaho ground squirrels occur only in southwest Idaho, and are currently found in a 518,000-acre area in the Weiser River Basin. Current information indicates that the species has been declining throughout its range since 1985. Conservation measures implemented on private lands are important for the long-term survival of the southern Idaho ground

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squirrel. Eighty-five percent of the known occupied ground squirrel sites are located on private lands, primarily ranches and farms; 12% of the species' occupied sites are federally managed by the Bureau of Land Management, and 3% of the sites are on lands managed by Idaho Department of Lands.

Candidate Conservation Agreements allow for conservation activities in which participating landowners can voluntarily participate to benefit species that are proposed for listing under the ESA, or other sensitive species. The agreements encourage private and other non-federal property owners to implement conservation efforts and to reduce threats to unlisted species, assuring that landowners will not be subjected to increased property use restrictions if the species is listed during the period of the agreement.

For more information about private landowner conservation planning or Candidate Conservation Agreements, please contact Dennis Mackey at the U.S. Fish and Wildlife Service, Snake River Basin, 1387 S. Vinnell Way, Room 368, Boise, ID 83709, (208) 378-5267.

FWS

The U.S. Fish and Wildlife Service is the principal Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 95-million-acre National Wildlife Refuge System which encompasses more than 540 national wildlife refuges, thousands of small wetlands and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices and 78 ecological services field stations. The agency enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

Southern Idaho Ground Squirrel Candidate Conservation Agreement with Assurances for the Soulen Livestock Company, Inc.

I. Authorities and Purpose

Sections 2, 7, and 10 of the Endangered Species Act of 1973, as amended (ESA), and the Fish and Wildlife Coordination Act, allow the U.S. Fish and Wildlife Service (FWS) to enter into this Agreement. Section 2 of the ESA states that encouraging parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the nation's heritage in fish, wildlife, and plants. Section 7 of the ESA requires the FWS to review programs that it administers and to utilize such programs in furtherance of the purposes of the ESA. By entering into this Agreement, the FWS is utilizing its Candidate Conservation Programs to further the conservation of the Nation's fish, wildlife, and plants. Lastly, section 10(a) of the ESA authorizes the issuance of permits to "enhance the survival" of a listed species.

The parties to this Agreement are the Idaho Department of Fish and Game (IDF&G), the Idaho Governor's Office of Species Conservation (OSC), the FWS ("the agencies"), and Soulen Livestock Company, Inc. (Soulen Livestock). The purpose of this Agreement is to establish self-sustaining populations of southern Idaho ground squirrels *(Spermophilus brunneus endemicus)* and to provide conservation measures for southern Idaho ground squirrels in Adams, Washington, Payette, and Gem Counties, Idaho, in support of ongoing efforts to reintroduce, and otherwise conserve, the species to areas that it historically occupied. The conservation measures would be implemented by the IDF&G, FWS, and by Soulen Livestock, and would generally consist of continued reintroduction of southern Idaho ground squirrels and management of their habitat. Consistent with the FWS's "Candidate Conservation Agreement with Assurances Final Policy" (64 Fed. Reg. 32726, June 17, 1999), the conservation goal of this Agreement is to encourage development and protection of suitable southern Idaho ground squirrel habitat and populations on Soulen Livestock's lands and support the successful reintroduction of the species to currently unoccupied habitat in western Idaho. The conservation goal will be met by giving Soulen Livestock incentives to implement conservation measures through funding and regulatory certainty concerning land use restrictions that might otherwise apply should southern Idaho ground squirrels become listed under the ESA.

This Agreement is a broad plan covering Soulen Livestock's enrolled lands identified below, and is intended to identify obligations of the parties. Consistent with the Agreement, Soulen Livestock would be issued a section 10(a)(1)(A) permit by the FWS, upon approval of the Agreement, including the attached Site-Specific Southern Idaho Ground Squirrel Management Plan for the Soulen Livestock Company, Inc. (site-specific plan) that, consistent with Soulen Livestock's land use goals and activities, provides adequate conservation for ground squirrels. When the Agreement and site-specific plan are approved, Soulen Livestock would be issued the permit authorizing incidental take of southern Idaho ground squirrels, should it occur, as long as the permit conditions, including implementation of the Agreement and site-specific plan, are followed. The

Agreement, combined with the site-specific plan, would constitute the Candidate Conservation Agreement with Assurances consistent with the FWS's final policy (FWS and NMFS 1999). The permit would include ESA regulatory assurances set forth at 50 CFR §§ 17.22(d)(5).

The Agreement has two general biological objectives intended to conserve southern Idaho ground squirrels. First, habitat enhancement, rehabilitation, or protection measures and/or ground squirrel reintroduction efforts at individual population sites are intended to increase ground squirrel populations at specific sites. Second, where possible and appropriate, expand populations at individual sites using native vegetation rehabilitation or other habitat management measures to create a larger, interconnected, suitable ground squirrel habitat base. The Agreement is intended to meet these biological objectives while also meeting the specific land use objectives of Soulen Livestock. Combining the biological and land use objectives will be the basis for conservation measures identified in each site-specific plan. The biological goal for success of the Agreement is the adequate protection of all occupied southern Idaho ground squirrel sites identified by the agencies as necessary for southern Idaho ground squirrel conservation on the enrolled lands. In the future, should other landowners develop similar agreements, those agreements would likely contain different conservation commitments and other obligations for the parties than those in this Agreement, due to differences in landowner's land use objectives and other constraints such as agency funding.

II. Background and Status of Southern Idaho Ground Squirrels

There are two distinct types of Idaho ground squirrels, and the current scientific nomenclature recognizes them as subspecies; the southern Idaho ground squirrel and the northern Idaho ground squirrel (*Spermophilus brunneus brunneus*) (Yensen 1991). Yensen (1991) thought that the two were close to species-level separation, and subsequent work has indicated that they could be validated as separate species (Gill and Yensen 1992, Gavin et al. 1999). The southern Idaho ground squirrel lives on lower elevation, paler colored soils formed by granitic sands and clays from the Boise Mountains while the northern Idaho ground squirrel is found at higher elevation areas with shallow reddish parent soils of basaltic origin. Marked differences in pelage coloration are related to soil color with the southern Idaho ground squirrel being noticeably paler (Yensen 1985, Yensen 1991).

The southern Idaho ground squirrel spends much of its time underground. Adults emerge from seasonal torpor in late January or early February, depending on elevation and microhabitat conditions (Yensen and Sherman 1997). As with other small-eared ground squirrels in the northwest, the adults have a short active season above ground of 4 to 5 months, which is spent reproducing and foraging before the long seasonal torpor begins (Moroz 1995, Yensen and Sherman 1997, Sherman 2000). Females are bred within the first few days of emerging from torpor. Young are born about three weeks later and emerge from the nest burrow in about 50 days. All age groups of the southern Idaho ground squirrel cease above ground activity by late June or early July to begin torpor.

Southern Idaho ground squirrels are found in the lower elevation shrub/steppe habitat of the Weiser River Basin. Their habitat is typified by rolling hills, basins and flats composed of lacustrine and fluvial sediments between 2,200-3,200ft elevations. They inhabit an area once dominated by big sagebrush (*Artemisia tridentata*), bitterbrush (*Purshia tridentata*), and a variety of native forbs and bunchgrasses (Yensen 1991). Prescott and Yensen (1999) suggested that these squirrels prefer areas with a high percentage of native cover types, especially areas with big sage; however, some non-native features may enhance their survival as well, specifically alfalfa fields, haystacks or fence lines. The predominant vegetation in these areas was formerly big sagebrush-bunchgrass-forb association, with bitterbrush found in the sandier locations (Yensen 2000). The big sagebrush-bunchgrass-forb complex has dramatically changed so that exotic annuals and other non-native species have replaced much of the former vegetative composition.

A high quality diet of green vegetation and seeds is required to store enough fat to survive long months of torpor. Though dietary requirements of the southern Idaho ground squirrel have not been studied extensively (Yensen and Sherman 1997), they are likely to be similar to those of other ground squirrels in Idaho (Dyni and Yensen 1996). Southern Idaho ground squirrels are thought to prefer native species of perennial grasses and forbs that provide a reliable source of nutritious forage (Yensen 1999, Prescott and Yensen 1999, Yensen et al. 1992). However, currently the site known to contain the largest population of southern Idaho ground squirrels is the Rolling Hills Golf Course in Weiser where they apparently do well on irrigated lawn grasses. Prescott and Yensen (1999) found that occupied southern Idaho ground squirrel sites commonly were associated with human-created habitat features. It appears as though ground squirrels can successfully inhabit non-native habitats if nutrition and other requirements can be met.

The current range of the southern Idaho ground squirrel occurs within an approximately 518,000-acre area extending from Emmett, Idaho, northwest to Weiser, Idaho and the surrounding area of Squaw Butte, Midvale Hill and Henley Basin in Gem, Payette and Washington Counties (Yensen 1991). Its range is bounded on the south by the Payette River, on the west by the Snake River and on the northeast by lava flows with little soil development (Yensen 1991).

The historic range of southern Idaho ground squirrels is estimated to have formerly extended farther north as far as Goodrich, Idaho in Adams County (Yensen 1980, Yensen 1991); however, recent studies have shown a severe decline in the number of population sites in the northern part of their range. For example, the only known historical site in Adams County was not occupied in 1999 (Yensen 1999, Yensen 2000), and southern Idaho ground squirrels may currently be extinct in Adams County (Yensen 2001).

The population of southern Idaho ground squirrels was estimated at around 40,000 in 1985 (Yensen 1999). Surveys strongly suggest a precipitous decline in squirrel populations since the mid 1980s. A 1999 survey of 145 of the 180 known historical population sites indicated that only 53 sites (37%) were still occupied (Yensen 1999). Furthermore, 52 of the 53 occupied sites had what Yensen (1999) characterized as

"remarkably low levels of activity". The percentage of active sites for southern Idaho ground squirrels decreases from south to north; 58% of the sites in Gem County still had squirrels (Yensen 1999). The percentage dropped to 46% in Payette County and decreased to 27% of the sites in Washington County. Ground squirrels were seen at only 19 of the occupied sites despite 28 person-days of careful surveys of 145 sites. Furthermore, at 18 of the occupied sites only a single individual was seen, fecal pellets were found at 13 sites and vocalizations were heard at only one site. The only population site in the study with a high level of squirrel activity was at the golf course in Weiser (Yensen 1999).

In the spring of 2000, Yensen (2000) surveyed the remaining 35 historical sites that had not been surveyed in 1999. From March-June 2000, the IDF&G surveyed 93 exchange parcels of Bureau of Land Management lands and about 30 mi^2 of contiguous rangeland for southern Idaho ground squirrels (Yensen and Haak 2000). As a result of surveys conducted in 1999 and 2000, a total of 219 sites (occupied and unoccupied) were identified (Yensen 2000). Of the 219 sites, 98 (44 %) were active sites in the year 2000. Activity was not confirmed or remained undetermined at the other 121 (56%) sites. Ground squirrel activity was low at all the sites surveyed. For comparison, in the early 1980s, several thousand individuals would likely have been observed during a survey throughout the range of southern Idaho ground squirrel (Yensen 2000). Of the 219 sites, 85% (186) were located on private lands, mostly ranches and farms, 12% (26) were under federal management by the Bureau of Land Management, and 3% (7) were on lands managed by the Idaho Department of Lands. These data do not represent a census of southern Idaho ground squirrels because they include only a small portion of the species' range.

A total of 76 new southern Idaho ground squirrel sites was identified during surveys in 2001 (Yensen 2001). The total number of known sites for the species range-wide is currently 295. However, consistent with results from surveys in recent years, the number of individual ground squirrels at each newly-identified site is very low. Yensen (2001) estimated the current range-wide population of southern Idaho ground squirrels to be from 2,000-4,500 individuals.

Habitat deterioration could be a leading cause of the apparent population decline of southern Idaho ground squirrels (Yensen 1999). In recent decades, invasion of exotic annuals has changed the species composition of vegetation and has altered the fire regime in a perpetuating cycle throughout much of the range of these squirrels (Whisenant 1990). Cheat grass (*Bromus tectorum*) and medusahead rye (*Taeniatherium asperum*) are of limited forage value to the ground squirrels, have highly variable annual productivity, and now dominate much of the squirrels' range (Yensen 1999, Yensen et al. 1992). Diversity of native forbs and grasses decreases where these exotics take over, limiting the dietary diversity available to ground squirrels (Yensen 1999). Without the reliable and nutritious diet provided by native grasses and forbs, these ground squirrels must rely on the highly variable productivity and nutritional value of exotic annuals. In years of low rainfall, low productivity of these exotics could prevent squirrels from storing enough fat to overwinter. Yensen et al. (1992) showed that populations of Pauite ground squirrels

(*Spermophilus mollis*) were highly unstable and prone to extinction in areas invaded by exotic annuals.

Although deterioration of native shrub-steppe habitat and invasion of exotic annual grasses has likely had a negative effect on southern Idaho ground squirrels, the species does use non-native vegetation and alternate habitats successfully. Many ground squirrel populations occur where human-related land use impacts are greatest, for example, around ranch corrals, fencelines, and equipment storage areas. Currently the largest population of southern Idaho ground squirrels is located on and adjacent to the Rolling Hills Golf Course and the Weiser Cemetery where the areas are generally dominated by irrigated lawn grasses. Prescott and Yensen (1999) found that sites occupied by southern Idaho ground squirrels had significantly more big sagebrush (*Artemisia tridentata*) than unoccupied sites. Prescott and Yensen (1999) also observed all occupied southern Idaho ground squirrels sites had at least one of the following: fences, haystacks, sagebrush, or nearby houses, and concluded that ground squirrels have a better chance of survival when one or more of these characteristics is present at a site. Ground squirrels may have used areas with sagebrush because cover of perennial vegetation is likely greater in these areas and/or sagebrush cover probably provides more hiding cover from predators Prescott and Yensen (1999). Ground squirrels may successfully use the human-related habitat features discussed above, such as fence lines and alfalfa fields, due to the cover these areas provide to avoid predators and high quality forage created by hayfields and the availability of nutritious early successional plant species growing in disturbed sites.

Recreational shooting of ground squirrels is common and is a notable mortality factor of southern Idaho ground squirrels, although no studies have been conducted to determine the specific effects on ground squirrel populations. Evidence of recreational shooting was found at a southern Idaho ground squirrel population site where squirrel activity recently ceased (Yensen 1999). The IDF&G recognizes the southern Idaho ground squirrel as a "Species of Special Concern". Species of Special Concern are protected, by state law, from "taking" (shooting, trapping, poisoning) or possession. To date, however, protection from recreational shooting of the southern Idaho ground squirrel has not been enforced by the State, and the southern Idaho ground squirrel remains vulnerable to this type of activity. Yensen (1998) suggested that the impact of recreational shooting on populations of southern Idaho ground squirrels should be evaluated throughout its range.

Ground squirrels are sometimes considered pests by many farmers and ranchers (Prescott and Yensen 1999). When available, alfalfa crops are one of the preferred food sources for southern Idaho ground squirrels, resulting in localized crop losses during years of high squirrel populations (Prescott and Yensen 1999). Badgers are often attracted to population sites of ground squirrels, where they dig large holes in the ground that can be dangerous to livestock (Prescott and Yensen 1999). Efforts to control ground squirrel populations are frequently undertaken regardless of species and most often include shooting or poisoning. Control efforts can adversely affect population sites of southern Idaho ground squirrels (Yensen 1998, Prescott and Yensen 1999, Yensen 2000). In fact, the population site thought to contain the greatest number of southern Idaho ground squirrels is located at the Rolling Hills Golf Course and is subject to annual control

efforts in an attempt to exterminate the squirrels (Bruce Haak, pers. comm. 2000). In addition, Yensen (1998) suggested that use of pesticides associated with crop production and insect infestation may also play a role in the decline of this species.

Because the number of southern Idaho ground squirrels at occupied sites is generally small, a disease outbreak could have a severe effect (Moroz et al. 1995). Disease has been suggested as potentially contributing to the decline of southern Idaho ground squirrels (Prescott and Yensen 1999, Yensen 1999), though no epizootic infestation has been noticed in either subspecies of Idaho ground squirrel (Yensen et al. 1996, Yensen and Sherman 1997). Blood analyses to determine whether pandemic diseases are present have not been done. Plague, a contagious bacterial disease found in rodents, has not been identified in southern Idaho ground squirrels (Yensen et al. 1996). The disease is of particular concern, since once established, it could decimate the remaining small numbers of squirrels at occupied sites.

Predation has not been suggested as one of the causes of the southern Idaho ground squirrels' decline; however, predators can have a severe impact on prey populations that occur at critically low numbers. For example, badgers have been known to extirpate entire colonies of Washington ground squirrels (*Spermophilus washingtoni*) (Betts 1999). As with northern Idaho ground squirrels, one can assume that southern Idaho ground squirrels are preyed upon by many species including the red-tailed hawks (*Buteo jamaicensis*), prairie falcons (*Falco mexicanus*), northern harriers (*Circus cyaneus*), badgers (*Taxidea taxus*), long-tailed weasels (*Mustela frenata*), and gopher snakes (*Pituophis melanoleucus*) (Yensen and Sherman 1997).

Competition with Columbian ground squirrels (*Spermophilus columbianus*) may constitute a threat to the continued existence of southern Idaho ground squirrels. The restricted range of Idaho ground squirrels occurs within the much wider range of the Columbian ground squirrel, and they occur sympatrically in some localities (Dyni and Yensen 1996). Southern Idaho ground squirrels are known to be limited by inter-specific competition with Columbian ground squirrels (Moroz et al. 1995, Yensen and Sherman 1997, Haak 2000), including competition for burrow sites (Haak 2000) and for food resources (Dyni and Yensen 1996). Where the two species occur sympatrically, Columbian ground squirrels occupy the more productive, mesic habitat with deeper soils (Yensen 1980, Dyni and Yensen 1996, Haak 2000).

Habitat destruction and fragmentation could have resulted in a distribution of relatively isolated population sites of southern Idaho ground squirrels. Isolation of these small populations may play a role in the decline of this species. For example, genetic evidence indicates that different populations of the northern subspecies are isolated enough to be genetically distinct from one another (Gavin et al. 1999, Yensen and Sherman 1997); this is likely to be the case for the southern subspecies as well. Small, isolated populations are more susceptible to natural disasters, catastrophic invasions of predators, parasites, or diseases, and suffer from loss of viability associated with genetic drift and inbreeding (Moroz et al. 1995, Gavin et al 1999).

The International Union for Conservation of Nature (IUCN) classified the southern Idaho ground squirrel as "vulnerable" (Hafner et al 1998). The IDF&G classified the southern Idaho ground squirrel as a "Species of Special Concern" in 1981. The FWS received a petition from the Biodiversity Legal Foundation, dated January 26, 2001, to list the southern Idaho ground squirrel as threatened or endangered under the ESA. In a letter, dated February 26, 2001, the FWS informed the Biodiversity Legal Foundation that due to funding constraints, it is not practicable for the FWS to address the petition at this time. The letter also indicated that the FWS anticipates making an initial finding in fiscal year 2002 as to whether the petition presents substantial information indicating that the listing may be warranted. On October 30, 2001, the FWS formally identified the southern Idaho ground squirrel as a candidate for listing under the ESA (66 Fed Reg. 54807, October 30, 2001).

III. Description of the Area and Enrolled Lands

For analysis purposes in this Agreement, we estimated the historical range of the southern Idaho ground squirrel within which it may be possible that southern Idaho ground squirrels could occur currently or in the future if reintroduction and other management efforts are successfully implemented. This area is approximately 800,525 acres in size and encompasses lower elevation shrub/steppe and grassland habitats generally between the towns of Cambridge on the north, Weiser and Payette on the west, the Payette River on the south, and Emmett on the east. Approximately 72% of the area is private land, 23% of the area is administered by the BLM, and 4% is managed by the Idaho Department of Lands. Most of the land is not irrigated and the dominant agricultural use is livestock grazing.

The "enrolled lands" are approximately 43,145 acres of Soulen Livestock lands covered by the Agreement and permit (Figure 1). The enrolled lands are either currently occupied by southern Idaho ground squirrels or lands that have unknown occupancy status that the agencies believe could be important to conservation of the species. Generally, enrolled lands are areas of low elevation shrub/steppe habitat dominated by sagebrush, bitterbrush and a variety of native forbs and bunch grasses or introduced grass species, and which border lands actively farmed to grow alfalfa or other preferred foods. These lands could also include "greenlines" around stock ponds, springs or perennial streams. Enrolled lands will likely have, or be capable of providing, woody debris, rocks, or other material suitable for cover and adequate soil type and depth for burrow sites. Finally, the lands should be as secure as possible from predation, both animal and human.

IV. Conservation Measures and Obligations of the Parties

Soulen Livestock. Soulen Livestock agrees to undertake these actions under the Agreement for southern Idaho ground squirrels:

A. Develop and implement a mutually agreeable site-specific plan for southern Idaho ground squirrels on the enrolled lands (See part XIII. of this Agreement). The site-specific plan will include, but is not limited to, the following components:

1) a detailed map of the enrolled lands including identification of all southern Idaho ground squirrel protected area(s);

2) a description of the current southern Idaho ground squirrel habitat conditions and population status on the enrolled lands;

3) total acreage of the enrolled lands and all protected area(s);

4) identification of ground squirrel conservation measures to be implemented on the enrolled lands (including protected area(s)), and how and when these measures will be implemented;

5) identification of the type and extent of land use activities within the protected area(s), and the remainder of the enrolled lands, and discussion of the expected effects of those activities on southern Idaho ground squirrels;

6) identification of ground squirrel conservation measures to minimize impacts from land use activities within protected area(s);

7) discussion of the conservation benefits to southern Idaho ground squirrels expected to be realized under the plan;

8) a specific monitoring plan, including, if appropriate, adaptive management provisions for the enrolled lands to document changes in southern Idaho ground squirrel habitat and/or population levels resulting from implementation of the plan; and

9) other information deemed necessary by Soulen Livestock or the agencies.

The intent of this Agreement and the accompanying site-specific plan is to enhance conservation of southern Idaho ground squirrels on the enrolled lands by providing conservation measures and minimizing impacts to ground squirrels within specific protected areas, thereby increasing and expanding the ground squirrel population to other enrolled lands. Ground squirrel conservation measures would be applied within the protected areas, and, in some cases, on enrolled lands outside of protected areas. These conservation measures could include, but are not limited to: translocating southern Idaho ground squirrels to establish new population sites; providing or enhancing vegetation species composition and structure desirable to ground squirrels, including rehabilitation of native shrub/steppe habitat, seeding, fertilizing, etc.; providing or enhancing ground squirrel escape cover (rocks, woody debris, etc.); eliminating or minimizing human caused mortality from shooting and poisoning; predator control; supplemental feeding; and other ground squirrel population or habitat management measures intended to meet the objectives of the Agreement. Impacts within protected areas would be minimized following practices specifically

identified in the site-specific plan, and most impacts from ongoing land use activities would occur on enrolled lands outside of the protected areas.

In order to qualify for approval, the Agreement and site-specific plan must result in a net improvement in ground squirrel habitat or populations, on the enrolled lands. These conservation benefits must be such that, if one assumed that comparable conservation measures were implemented on all necessary properties, the combined benefits would preclude or remove the need to list the southern Idaho ground squirrel.

B. Allow agency personnel access to the enrolled lands, as needed, to monitor compliance with the Agreement and site-specific plan and conduct ground squirrel conservation activities identified in the site-specific plan such as habitat enhancement, supplemental feeding, ground squirrel surveys and other monitoring, and translocation of excess ground squirrels.

During the term of the Agreement and site-specific plan, it will be necessary for the agencies to access the enrolled lands to monitor compliance and carry out various ground squirrel management actions identified in the site-specific plan such as: translocating ground squirrels, modify or otherwise improve habitats on the enrolled lands for use by southern Idaho ground squirrels, adding rock, logs or other structures for cover or burrowing sites, and other measures. In addition, the agencies may wish to supplement food or nutritional sources, provided such additions pose no risks to livestock that may use the area.

C. If appropriate, cooperate with the agencies to develop and place signs to discourage shooting of ground squirrels.

Shooting of ground squirrels could be a threat to southern Idaho ground squirrels. It may be possible to reduce the potential for shooting mortality by placing signs or using other methods to discourage shooting.

D. Cooperate with the agencies on other issues necessary to further the purposes of the Agreement.

Opportunities may arise from time to time to provide southern Idaho ground squirrel conservation without significant effects to Soulen Livestock's planned land use activities. In such cases, the agencies and Soulen Livestock will work together to identify and implement such measures. Examples of such measures are control of Columbian ground squirrels to reduce competition with southern Idaho ground squirrels or the construction of temporary fences to facilitate rehabilitation or enhancement of ground squirrel habitat as it may be negatively impacted by grazing or other land uses.

E. Comply with other applicable provisions of the permit this Agreement, and the site-specific plan.

U.S. Fish and Wildlife Service.

A. Cooperate with Soulen Livestock, the IDFG, and OSC to develop and implement the mutually agreeable site-specific plan discussed above.

B. Upon approval of the Agreement and site-specific plan, issue Soulen Livestock a section 10(a)(1)(A) permit, in accordance with 50 CFR 17.32 (d), that would provide Soulen Livestock with authorization for incidental take of southern Idaho ground squirrels and provide regulatory assurances should the species be listed under the ESA in the future. The permit would authorize incidental take of southern Idaho ground squirrels, consistent with the site-specific plan, resulting from the otherwise lawful activities on the enrolled lands: crop cultivation and harvesting, livestock grazing and production, farm equipment operation, and recreational activities (e.g., hunting, fishing, camping, hiking, and use of recreational vehicles on and off established roads). Consistent with FWS policy, application of pesticides will not be a covered activity under the permit.

C. Implement and administer this Agreement including, but not limited to: monitoring compliance with the Agreement and site-specific plan, monitoring southern Idaho ground squirrel distribution and status within the enrolled lands, coordinating private landowner habitat management efforts, translocation of southern Idaho ground squirrels if necessary for successful reintroduction of the species, and carrying out ground squirrel conservation measures specified in the site-specific plan.

D. Provide necessary available federal funding to Soulen Livestock in accordance with part V. of this Agreement.

E. Prepare annual reports on implementation of the Agreement in accordance with part VIII. of this Agreement.

F. If appropriate, provide funding under the FWS's Partners for Fish and Wildlife Program to benefit southern Idaho ground squirrels or their habitat.

Idaho Department of Fish and Game.

A. Cooperate with Soulen Livestock, the FWS, and OSC to develop and implement the mutually agreeable site-specific plan discussed above.

B. Cooperate with the FWS concerning monitoring of Agreement effectiveness identified in part VIII. of this Agreement and monitoring provisions identified in the site-specific plan.

C. Carry out southern Idaho ground squirrel conservation measures identified as the responsibility of the IDF&G, if any, specified in the site-specific plan.

D. Provide necessary available state funding to Soulen Livestock in accordance with part V. of this Agreement.

E. Assist the FWS in preparation of annual reports (i.e. provide all IDF&G monitoring records to the FWS on an annual basis) in accordance with part VIII. of this Agreement.

Idaho Governor's Office of Species Conservation.

A. Cooperate with Soulen Livestock, the FWS, and IDF&G to develop and implement the mutually agreeable site-specific plan discussed above.

B. Provide necessary available state funding to Soulen Livestock in accordance with part V. of this Agreement.

V. Funding

If funds are available, the agencies will pay Soulen Livestock a sum as specified in the site-specific plan. This sum shall constitute both an incentive for participation in this Agreement and compensation for such land use restrictions as may arise from the Agreement for the enrolled lands identified in the site-specific plan. Soulen Livestock can participate under this Agreement without funding from the agencies if they choose to otherwise implement the site-specific plan.

In the event Soulen Livestock sells all or part of the enrolled lands prior to the full term of this Agreement, Soulen Livestock will notify the agencies at least 60 days in advance of the potential sale, and notify the prospective landowner of the existence of this Agreement (and/or have previously recorded the Agreement) in order for the potential new owner to decide whether to continue this Agreement. In the event the new landowner does not wish to continue this Agreement and request transfer of the permit pursuant to 50 CFR 13.25(b), Soulen Livestock terminates this Agreement for other reasons, or the FWS suspends or revokes the permit, Soulen Livestock will reimburse the agencies a pro-rated amount, calculated as: (Total Funding Received ÷ Original Term of Soulen Livestock's Permit) × (Number of Years Remaining to be Completed Under the Permit). Reimbursement is not required for any funds used by Soulen Livestock for completed ground squirrel habitat enhancement projects. If the new landowner does not become a party to this or a similar Agreement and the permit is not transferred or a new permit is not issued, the new landowner will not receive the benefits of the permit authorizing incidental take of southern Idaho ground squirrels.

In addition, the agencies, in a manner mutually agreeable to them, will bear the following costs to the extent funds are available:

- Labor and materials for fencing, providing for alternate livestock watering areas, seeding, fertilizing, purchasing hay, or other land management actions deemed necessary by the agencies to benefit southern Idaho ground squirrels as identified in the site-specific management plan(s). Providing alternate water sources, seeding, and fertilizing could be used to directly improve vegetation quantity and quality for use by ground squirrels. Purchasing hay could be used in some cases to compensate landowners from alfalfa damage caused by ground squirrels. Based on discussions with range managers with expertise in range rehabilitation, approximate cost estimates ranged from $120-180 per acre per year.

- Labor and materials for enhancement of habitat or other measures identified in the site-specific plan.

- Funding for other, currently unforeseen, habitat conservation measures deemed by the agencies to be beneficial to southern Idaho ground squirrel conservation.

VI. Incidental Take Permits and "No Surprises" Policy

Upon approval of the Agreement and site-specific plan, and satisfaction of all other applicable legal requirements, the Service will issue a permit, in accordance with section 10(a)(1)(A) of the ESA, to Soulen Livestock authorizing incidental take of southern Idaho ground squirrels, as a result of land use activities on the enrolled lands in a manner described in the site-specific plan. The permit will authorize incidental take resulting from Soulen Livestock's otherwise-lawful activities that are described in the site-specific plan. These activities may include: crop cultivation and harvesting, livestock grazing and production, farm equipment operation, and recreational activities (e.g., hunting, fishing, camping, hiking, and use of recreational vehicles both on and off established roads). The FWS provides Soulen Livestock the ESA regulatory assurances found at 50 CFR §§ 17.22(d)(5), 17.32(d)(5).

Consistent with the FWS's Candidate Conservation Agreement with Assurances Final Policy (64 Fed. Reg. 32726, June 17, 1999), conservation measures and land, water, or resource use restrictions in addition to the measures and restrictions described in this Agreement and the site-specific plan will not be imposed with respect to agricultural activities on enrolled land should southern Idaho ground squirrels become listed under the ESA in the future. These assurances are authorized by the enhancement of survival permit issued under section 10(a)(1)(A) of the ESA for the enrolled lands identified in the site-specific plan. In the event of unforeseen circumstances, the FWS will not require the commitment of additional land, water, or other natural resources beyond the level otherwise agreed to for the species in this Agreement without the consent of Soulen Livestock. The permit will authorize Soulen Livestock to incidentally take southern Idaho ground squirrels as long as such take is consistent with this Agreement, the site-specific plan, and the permit.

Changed circumstances are those factors that negatively affect ground squirrels and that can reasonably be anticipated and planned for under the Agreement. Wildfires occur

throughout the area of the enrolled lands, and in some cases could have a negative affect on ground squirrels. Due to the variation in possible effects to the species and necessary conservation measures, it is not possible to identify specific measures to address wildfires at this time. During the term of the Agreement and permit, should a wildfire occur at any ground squirrel-occupied site or site designated as a reintroduction/translocation site, Soulen Livestock and the agencies will work in good faith to develop and implement conservation measures to minimize post-fire effects to ground squirrels.

VII. Duration of the Agreement and Permit

The duration of this Agreement and site-specific plan will be 20 years from the date upon which all parties have signed it. The permit issued in accordance with this Agreement and site-specific plan will expire on the same date upon which this Agreement expires.

Given the probable ground squirrel response time to transplanting and habitat management, the FWS estimates it may take 10 years of implementing the Agreement and site-specific plan to fully reach a net conservation benefit for the species, although some level of benefits will likely occur within two to three years.

VIII. Monitoring and Reporting

Monitoring.

The agencies will fund monitoring and ground squirrel survey efforts under the Agreement to the extent that funds are available. Within six years of Agreement approval, the FWS and IDF&G will conduct southern Idaho ground squirrel occupancy surveys of the enrolled lands to identify all occupied sites and potential reintroduction/translocation sites. Generally, two kinds of effectiveness monitoring will be conducted by the FWS and IDF&G on an annual basis to validate the conservation measures of the site-specific plan: population and habitat monitoring.

An intensive population census will be conducted on a sample of population sites that are included under the site-specific plan. Sample locations will be selected from sites identified in the site-specific plan to encompass a variety of conservation options being implemented. Ground squirrels will be trapped and marked at each of the sampled population sites. Trapped ground squirrels will be aged (juvenile, yearling, adult), weighed, sex determined, and marked with numbered ear tags. This will allow biologists to determine, over a number of years, the population structure and dynamics at each sampled site, and how ground squirrels are responding to habitat conservation measures and other variables.

An extensive population census will be done annually at population sites that are not measured intensively. If available, 10-15 sites will be monitored, and if 10 or less occupied sites occur on the enrolled lands all sites will be monitored. Extensive population census does not require that animals be trapped, but includes conducting time/count transects to determine the relative size of the population. These counts will be

conducted at least twice during the season when ground squirrels are active, once before the juveniles emerge from burrows, and once after they become active above ground. Extensive population censuses will allow biologists to determine a relative index of the numbers of ground squirrels over a period of five or ten years. The combination of the intensive and extensive census monitoring will allow biologists to create a meta-population model that has high predictive value for determining population site persistence and the natural range of variation of the overall population of southern Idaho ground squirrels.

Habitat analysis will be done each year to determine the effectiveness of conservation measures where habitat enhancement or rehabilitation is implemented. Areas where habitat treatments are applied will be compared to control areas where habitat conservation areas are not implemented. The comparison of these treated and untreated sites will enable determination of which vegetation prescriptions are the most desirable for southern Idaho ground squirrels, and allow for refinement of habitat conservation measures. The specific type of habitat analysis and the techniques involved will be identified in the site-specific plan. A plant diversity transect will be conducted at each ground squirrel population site to document the occurrence and frequency of plant species before and after habitat conservation measures are implemented.

The FWS will conduct compliance monitoring on an as-needed basis. Monitoring costs for personnel are estimated to be $10,000/year ($5000/person for a 3 month field season), not including travel costs.

Reporting.

The FWS will be responsible for completion of an annual report on Agreement implementation by 1 February each year. The IDF&G will be responsible for submitting to the FWS by 1 November each year a report summarizing monitoring records collected during the year. Information in annual reports will include, but is not limited to: 1) habitat management or other activities conducted within the protected area(s) over the past year, 2) effectiveness of these management activities in meeting the desired results, 3) status of habitat or other ground squirrel management actions conducted in previous years, 4) results of ground squirrel population, productivity, and habitat surveys, if any, on the enrolled lands both within and outside of the protected area(s), 5) the results of any ground squirrel translocation efforts, and 6) recommendations for future ground squirrel management activities consistent with the Agreement. A copy of the report will be made available to Soulen Livestock and to each agency.

IX. Expected Conservation Benefits

As identified in the FWS's Candidate Conservation Agreement with Assurances Final Policy (FWS and NMFS 1999), the FWS must determine that the conservation measures and the expected benefits, when combined with those benefits that would be achieved if it is assumed that similar conservation measures were also implemented on other necessary properties, would preclude or remove the need to list southern Idaho ground squirrels.

When making a decision to list a species under the ESA, the FWS is required to determine whether the species is threatened by any of the following factors: 1) the present or threatened destruction, modification, or curtailment of its habitat or range, 2) overutilization for commercial, recreational, scientific, or educational purposes, 3) disease or predation, 4) the inadequacy of existing regulatory mechanisms, or 5) other natural or manmade factors affecting the species continued existence. There are threats to the southern Idaho ground squirrel related to each of these factors. These threats are discussed in part II of this Agreement and summarized below.

Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range.

Habitat deterioration appears to be a leading cause of the population decline of southern Idaho ground squirrels (Yensen 1999). In recent decades, invasion of exotic annuals has changed the species composition of vegetation and has altered the fire regime in a perpetuating cycle throughout much of the range of these squirrels (Whisenant 1990). Cheatgrass and medusahead are of limited forage value to the squirrels, have highly variable annual productivity, and now dominate much of the squirrels' range (Yensen 1999, Yensen et al. 1992). Diversity of native forbs and grasses decreases where these exotics take over, limiting the dietary diversity available to ground squirrels (Yensen 1999). Without the reliable and nutritious diet provided by native grasses and forbs, these squirrels must rely on the highly variable productivity and nutritional value of exotic annuals. In years of low rainfall, low productivity of these exotics could prevent squirrels from storing enough fat to overwinter successfully. Yensen et al. (1992) showed that populations of Pauite ground squirrels were highly unstable and prone to extinction in areas invaded by exotic annuals.

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes.

Recreational shooting of ground squirrels is common and has a detrimental effect on populations of southern Idaho ground squirrels. Evidence of recreational shooting was found at a southern Idaho ground squirrel population site where squirrel activity recently ceased (Yensen 1999). The IDF&G recognizes the southern Idaho ground squirrel as a "Species of Special Concern" (Idaho Department of Fish and Game 1994). Species of Special Concern by State law are protected from taking (shooting, trapping, poisoning) or possession. To date, however, protection from recreation shooting of the southern Idaho ground squirrel has not been enforced by the State, and the southern Idaho ground squirrel remains vulnerable to this type of activity. While an undetermined number of southern Idaho ground squirrels has been collected during a 30 year period for scientific and taxonomic study, scientific collection is not considered a significant factor in their overall decline (Moroz et al. 1995).

Disease or Predation.

Because the number of southern Idaho ground squirrels at occupied sites is generally small, a disease outbreak could have a severe effect on this species (Moroz et al. 1995). Disease has been suggested as potentially contributing to the decline of these squirrels (Prescott and Yensen 1999, Yensen 1999), though no epizootic infestation has been noticed in either subspecies of Idaho ground squirrel (Yensen et al. 1996, Yensen and Sherman 1997). Blood analyses to determine whether pandemic diseases are present have not been done but should be considered in the future. Plague, a contagious bacterial disease found in rodents, has not been identified in southern Idaho ground squirrels (Yensen et al. 1996). The disease is of particular concern, once established, it could decimate the remaining small numbers of squirrels at occupied sites.

Predation has not been suggested as one of the causes of the Southern Idaho ground squirrels' decline; however, predators can have a severe impact on prey populations that occur at critically low numbers. For example, badgers have been known to extirpate entire colonies of Washington ground squirrels (Betts 1999).

Inadequacy of Existing Regulatory Mechanisms.

Currently, the southern Idaho ground squirrel is not protected by federal or local laws. The IDF&G classified the southern Idaho ground squirrel as a "Species of Special Concern" in 1981. Because of this status, the species is protected by State law from taking (shooting, trapping, poisoning) or possession. To date, however, protection from recreational shooting or poisoning has not been enforced by the State, and the southern Idaho ground squirrel remains vulnerable to this type of activity.

The state and federal agencies are aware of the apparent population decline of the southern Idaho ground squirrel. However, there is no requirement for an agency to cooperate with the FWS in conserving unlisted or candidate species. Only species that are proposed for listing are covered by the conference procedures of Section 7(a)(4) of the ESA.

Other Natural or Manmade Factors Affecting the Species Continued Existence.

Ground squirrels are considered pests by many farmers and ranchers (Prescott and Yensen 1999). When available, alfalfa crops are one of the preferred food sources for southern Idaho ground squirrels, resulting in localized crop losses during years of high squirrel populations (Prescott and Yensen 1999). Badgers are often attracted to population sites of ground squirrels, where they dig large holes in the ground that can be dangerous to livestock (Prescott and Yensen 1999). Efforts to control ground squirrel populations are frequently undertaken regardless of species and most often include shooting or poisoning. Control efforts can adversely affect population sites of southern Idaho ground squirrels (Yensen 1998, Prescott and Yensen 1999, Yensen 2000). In addition, Yensen (1998) suggested that use of pesticides associated with crop production and insect infestation may also play a role in the decline of this species.

Competition with Columbian ground squirrels may constitute a threat to the continued existence of southern Idaho ground squirrels. Southern Idaho ground squirrels are known to be limited by interspecific competition with Columbian ground squirrels (Moroz et al. 1995, Yensen and Sherman 1997, Haak 2000), including competition for burrow sites (Haak 2000) and for food resources (Dyni and Yensen 1996). Where the two species occur sympatrically, Columbian ground squirrels occupy the more productive, mesic habitat with deeper soils (Yensen 1980, Dyni and Yensen 1996, Haak 2000).

Habitat destruction and fragmentation have resulted in a distribution of relatively isolated population sites of southern Idaho ground squirrels. Isolation of these small populations may play a role in the decline of this species. For example, genetic evidence indicates that different populations of the northern subspecies are isolated enough to be genetically distinct from one another (Gavin et al. 1999, Yensen and Sherman 1997); this is likely to be the case for the southern subspecies as well. Small, isolated populations are more susceptible to natural disasters, catastrophic invasions of predators, parasites, or diseases, and suffer from loss of in viability associated with genetic drift and inbreeding (Moroz et al. 1995, Gavin et al 1999).

Relationship of the Agreement to the Five Threat Factors.

The Agreement is intended to reduce threats to southern Idaho ground squirrels under each of the five threat categories. Conservation benefits for southern Idaho ground squirrels from implementation of the Agreement and site-specific plan are expected in the form of enhancement and restoration of southern Idaho ground squirrel habitat and populations and expansion of the current population of the species to currently unoccupied, historical range. This is intended to contribute to an increase and reestablishment of southern Idaho ground squirrels over Soulen Livestock's enrolled lands. In addition, since non-federal landowners control most of the sites containing southern Idaho ground squirrels, conservation of southern Idaho ground squirrels could be enhanced by improving and encouraging cooperative management efforts between the agencies and other landowners.

Deterioration of native shrub-bunchgrass-forb habitat complex could be the leading cause of the population decline of southern Idaho ground squirrels (Yensen 1999). Habitat destruction and fragmentation appear to have resulted in a distribution of relatively isolated population sites of southern Idaho ground squirrels. In addition, most of these sites support a low number of ground squirrels. Under the Agreement and site-specific plan, habitat protection/enhancement measures would be implemented at ground squirrel-occupied and reintroduction/translocation sites over the 43,145 acres of Soulen Livestock's enrolled lands. Currently, 30 acres of the enrolled lands have been identified in the site-specific plan and habitat conservation measures have been identified. The remaining 43,115 acres of the enrolled lands (category 3 lands) have not been surveyed for ground squirrel occupancy, and no specific habitat conservation measures have been identified on these lands. Under the Agreement, both individual animals and their habitat will be protected from land use activities that may have adverse affects at any sites

identified in the future as occupied by southern Idaho ground squirrels, or sites identified by the agencies as reintroduction/translocation sites. These protection measures will include, among other things, habitat protection /enhancement measures. Should, in the FWS's judgement, these ground squirrel protection measures developed in the future between Soulen Livestock and the agencies be inadequate to conserve southern Idaho ground squirrels, the FWS could suspend the permit; therefore, conservation measures will be adequate at these sites as long as the permit is in effect. The habitat protection/enhancement measures would be intended to provide a high quality, more dependable forage base for ground squirrels. These habitat enhancement measures would include the rehabilitation of areas to native vegetation or other plant species that would provide high quality forage for ground squirrels if the site is lacking an adequate amount of quality forage. Native vegetation species that could be used for habitat rehabilitation include: basin big sagebrush (*Artemisia tridentata*), Wyoming sagebrush (*Artemisia wyomingensis*), bitterbrush (*Purshia tridentata*), biscuitroot (*Lomatium spp.*), medic (*Medicago spp.*), Sandberg's bluegrass (*Poa sandbergii*), squirreltail (*Sitanion hystrix*), onion (*Allium acuminatum*), lupine (*Lupinus leucophylus*), Idaho fescue (*Festuca idahoensis*), and cinquefoil (*Potentilla gracilis*). Non-native species that could be used in habitat enhancement measures could include: bulbous bluegrass (*Poa bulbosa*), Kentucky bluegrass (*Poa pratensis*), danthonia (*Danthonia californica*), hawksbeard (*Crepis acuminata*), and Mediteranian cochia. This species list is based partially on plant species known to be consumed by northern Idaho ground squirrels (Dyni and Yensen 1996). The intent of these conservation measures is to increase the population of ground squirrels within protected areas, allowing expansion into adjacent areas of the enrolled lands. Due to the pervasive invasion of exotic annual vegetation throughout the range of the southern Idaho ground squirrel, without active management to change the vegetation composition at important ground squirrel sites, such as proposed under this Agreement, current habitat conditions and the resulting negative effects to ground squirrels are not expected to improve.

Direct mortality from recreational shooting southern Idaho ground squirrels is a threat to the species. To date, protection from shooting of southern Idaho ground squirrels has been minimal, and southern Idaho ground squirrels remain vulnerable to this type of mortality. Under the Agreement and site-specific plan, ground squirrels would be protected from shooting: the site-specific plan includes specific provisions for eliminating direct killing of ground squirrels from shooting, trapping, or poisoning by Soulen Livestock over all 43,145 acres of enrolled lands; the Agreement contains provisions for minimizing direct killing of ground squirrels by third parties, including the development and placement of signs to discourage recreational shooting of ground squirrels. The Agreement and site-specific plan are expected to eliminate or significantly minimize ground squirrel mortality from recreational and other shooting.

Many sites occupied by southern Idaho ground squirrels in the past are currently unoccupied. Isolation of small populations of southern Idaho ground squirrels as a result of habitat deterioration and fragmentation is likely not conducive to long-term survival of the species. Small, isolated populations are more susceptible to diseases and predators. The Agreement and site-specific plan are expected to benefit southern Idaho ground

squirrels by increasing ground squirrel populations on enrolled lands from habitat enhancement and other protection measures, and expanding the current range of the species by reintroducing/translocating ground squirrels into currently suitable, but unoccupied habitat. Ground squirrel populations should be less vulnerable to the effects from disease and predators as population sizes increase. In addition, the Agreement contains provisions for the IDF&G and FWS to control badgers, a primary predator of ground squirrels, if necessary for conservation purposes.

The southern Idaho ground squirrel is classified by IDF&G as a "Species of Special Concern", and is protected by existing State law from taking (shooting, trapping, poisoning) or possession. To date, however, protection from shooting, trapping or poisoning has not been enforced by the State, and the southern Idaho ground squirrel remains vulnerable to these activities. Direct mortality from these activities are a threat to the species. The Agreement contains specific commitments by Soulen Livestock to protect southern Idaho ground squirrels from shooting, trapping and poisoning over all 43,145 acres of enrolled lands. The Agreement and site-specific plan are expected to eliminate or significantly minimize ground squirrel mortality from shooting, trapping or poisoning.

Competition with Columbian ground squirrels may constitute a threat to southern Idaho ground squirrels at specific sites. Under the Agreement, the IDF&G and the FWS will control the use of southern Idaho ground squirrel population sites by Columbian ground squirrels, if appropriate. Badgers and Columbian ground squirrels will be controlled on a limited, case-by-case basis in the event that either of these two species pose a threat to the viability of a southern Idaho ground squirrel population at a particular site.

The Agreement addresses the threats to southern Idaho ground squirrels under all five factors upon which the FWS would base a future ESA listing decision. Conservation commitments include measures to protect/enhance habitat, which is likely the single greatest threat to southern Idaho ground squirrels. Conservation measures also include commitments to reduce direct ground squirrel mortality, as well as commitments to reintroduce/translocate ground squirrels in to unoccupied habitat, thereby, expanding the species' distribution. Some type of conservation commitment applies to all 43,145 acres of Soulen Livestock's enrolled lands (approximately 8% of the species' current range), although many specific measures will depend on future ground squirrel surveys and which lands are determined to be occupied by the species, or identified by the agencies as reintroduction/translocation sites. Should all necessary landowners within the historical range of the species participate and provide conservation measures similar to those in this Agreement and the site-specific plan such as habitat enhancement, reduction or elimination of shooting, trapping and poisoning, and reintroduction of ground squirrels to unoccupied habitat, a substantial conservation benefit would be realized for the species. The Agreement and site-specific plan are expected to result in a larger number and more widely distributed population of ground squirrels than occurs currently. If conservation measures were implemented on all necessary properties, the FWS believes that the need to list southern Idaho ground squirrels would likely be precluded or removed.

X. Level of Incidental Take

Under the Agreement, incidental take would be authorized on all 43,145 acres of Soulen Livestock's enrolled lands. Should southern Idaho ground squirrels be listed under the ESA, Soulen Livestock would be authorized for incidental take from their otherwise lawful crop cultivation and harvesting, livestock grazing and production, farm equipment operation, and recreational activities. The level of incidental take can best be described using two categories of enrolled lands: enrolled lands within protected areas, and enrolled lands outside of protected areas.

Within protected areas, incidental take of southern Idaho ground squirrels is expected to be minimal. Under the Agreement, protected areas are intended to be core conservation areas supporting populations of southern Idaho ground squirrels over the long-term. Conservation measures in the Agreement are intended to ensure impacts to the species from land use activities in these areas will be kept to a minimum. Incidental take will be authorized for two individual ground squirrels per protected area per year. While land use activities consistent with specific conservation measures conducted within these areas may have minimal negative effects on ground squirrels, some minor chance of incidental take could occur. It is this level of infrequent, minor, incidental take that is intended to be authorized under the permit within protected areas. The actual level of incidental take is unquantifiable, but is expected to range from none to minor disturbance and harassment or, in some rare cases, injury or death of ground squirrels from equipment operation or livestock trampling. A requirement is included in the Agreement that requires Soulen Livestock to cooperate with the agencies to minimize direct mortality from plowing, cultivating, or other ground-disturbing activities within and adjacent to protected areas. If direct mortality cannot be avoided, this will give the agencies the opportunity to translocate ground squirrels prior to ground disturbance. A notification requirement will be included as a condition of the permit that requires Soulen Livestock to notify the agencies one month prior to new ground disturbance activities within ground squirrel protected areas. Such new activities shall include excavations of all types, but shall not include normal cultivation or plowing of established fields in which alfalfa, grass hay or other crops are grown. In addition, by March 1 of each year, the agencies will notify Soulen Livestock if southern Idaho ground squirrels have expanded beyond the boundaries of any ground squirrel protected area or into cultivated fields that are within or adjacent to protected areas. If ground squirrels have expanded to adjacent lands beyond the boundaries of a protected area or to the cultivated fields within protected areas, the agencies and Soulen Livestock will develop measures to minimize any incidental take that could result from ground disturbance activities. If two southern Idaho ground squirrels are determined to have been incidentally taken within any protected area during any calendar year, the FWS and Soulen Livestock will identify and implement additional protective measures to minimize any further incidental take.

The greatest level of incidental take would likely occur on enrolled lands outside of protected areas and this level of incidental take is unquantifiable. Take in these areas would most likely occur as a result of activities in areas which are not known to be occupied. A small percentage of these unprotected areas may also include squirrels that

have dispersed from established protected areas. The timing and extent of incidental take would likely be highly variable, depending on the specific land use activities occurring on the lands. In some cases, incidental take may not occur at all, while in others incidental take may occur in the form of complete loss of all ground squirrels. For example, if the land use activity proposed is occasional livestock grazing, incidental take most likely will not occur; whereas, if crop cultivation is the land use activity, all ground squirrels may be eliminated from the area. Since the primary crop on Soulen Livestock's land is alfalfa hay, and alfalfa is reseeded approximately every 8-10 years, even if ground squirrels did occupy an area to be plowed, impacts would likely only occur occasionally over the 20 year life of the permit.

Overall, given the Agreement's conservation goal of providing long-term ground squirrel conservation within protected areas, and shorter-term conservation value on enrolled lands outside of protected areas, the long-term conservation of southern Idaho ground squirrels is expected to be enhanced by the Agreement and site-specific plan even with some authorization of incidental take under the permit. The actual level of incidental take is largely unquantifiable, and will be dependent on the specific measures outlined in the site-specific plan. Prior to the Agreement and site-specific plan being approved, and issuance of the permit to Soulen Livestock, the FWS will analyze the site-specific impacts to southern Idaho ground squirrels, including the level of incidental take, to satisfy the FWS's responsibilities under sections 7 and 10 of the ESA.

XI. Additional Provisions

A. Modifications of the Agreement. Any party may propose modifications to this Agreement by providing written notice to the other party. Such notice shall include a statement of the proposed modification and the reason for the modification. The parties will use their best efforts to respond to proposed modifications within 60 days of receipt of such notice. Proposed modifications will become effective upon the other parties' written approval and completion of any necessary environmental analysis as required by the National Environmental Policy Act or ESA.

B. Amendment of the Permits. Permits issued under this Agreement may be amended in accordance with all applicable legal requirements, including but not limited to the ESA, the National Environmental Policy Act, and the FWS's permit regulations. The party proposing the amendment shall provide a statement of the proposed amendment and the reasons for the amendment.

C. Permit Suspension or Revocation. Soulen Livestock and the agencies will cooperate in good faith to develop adequate site-specific southern Idaho ground squirrel protection measures at all ground squirrel occupied sites and reintroduction/translocation sites. If the parties cannot reach agreement on these measures, and the FWS determines the measures will not meet intended conservation benefits, Soulen Livestock will be found to not be in compliance with the conditions of the permit and the FWS will retain the authority to immediately suspend the permit at its sole discretion, consistent with current regulations described in 50 CFR 13.27 (a).

D. Remedies. Each party shall have all remedies otherwise available to enforce the terms of this Agreement and the permit, except that no party shall be liable in damages for any breach of this Agreement, any performance or failure to perform an obligation under this Agreement or any other cause of action arising from this Agreement.

E. Dispute Resolution. The parties agree to work together in good faith to resolve any disputes.

F. Availability of Funds. Implementation of this Agreement is subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this Agreement will be construed by the parties to require the obligation, appropriation, or expenditure of any money from the U.S. Treasury. The parties acknowledge that the FWS will not be required under this Agreement to expend any federal agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

G. No Third-party Beneficiaries. This Agreement does not create any new right or interest in any member of the public as a third-party beneficiary, nor shall it authorize anyone not a party to this Agreement to maintain a suit for personal injuries or damages pursuant to the provisions of this Agreement. The duties, obligations, and responsibilities of the parties to this Agreement with respect to third parties shall remain as imposed under existing law.

H. Relationship to Authorities. The terms of this Agreement shall be governed by and construed in accordance with applicable federal law. Nothing in this Agreement is intended to limit the authority of the FWS to fulfill its responsibilities under federal laws. All activities undertaken pursuant to this Agreement or the permit must be in compliance with all applicable state and federal laws and regulations.

I. Succession and Transfer. This Agreement shall be binding on and shall inure to the benefit of the parties and their respective successors and transferees, in accordance with applicable regulations (currently codified at 50 CFR 13.24 and 13.25).

J. Notices and Reports. Any notices or reports required by this Agreement shall be delivered in writing to:

Soulen Livestock Company, Inc.
1760 Fairmont Drive
Weiser, Idaho 83672
208-549-0922 (Telephone)
208-549-8329 (Fax)

Supervisor, Snake River Basin Office
U.S. Fish and Wildlife Service
1387 S. Vinnell Way, Room 368

Boise, Idaho 83709
208-378-5243 (Telephone)
208-378-5262 (Fax)

Regional Supervisor
Idaho Department of Fish and Game
3101 South Powerline Road
Nampa, Idaho 83686
208-465-8465 (Telephone)
208-465-8467 (Fax)

Administrator
Governor's Office of Species Conservation
P.O. Box 83720
Boise, Idaho 83720
208-334-2189 (Telephone)
208-334-2172 (Fax)

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XIII. Site-Specific Southern Idaho Ground Squirrel Management Plan for the Soulen Livestock Company, Inc.

Site-Specific Southern Idaho Ground Squirrel Management Plan for the Soulen Livestock Company, Inc.

I. Introduction

Sections 2, 7, and 10 of the Endangered Species Act of 1973, as amended (ESA), and the Fish and Wildlife Coordination Act, allows the U.S. Fish and Wildlife Service (FWS) to enter into agreements to conserve species. Section 2 of the ESA states that encouraging parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the Nation's heritage in fish, wildlife, and plants. Section 10(a) of the ESA authorizes the issuance of permits to "enhance the survival" of listed species.

In accordance with these provisions of the law, the FWS has entered into the Candidate Conservation Agreement with Assurances (Agreement) with the Idaho Department of Fish and Game (IDF&G), the Governor's Office of Species Conservation (OSC) (collectively, the agencies), and Soulen Livestock Company, Inc. (Soulen Livestock), 1760 Fairmont Drive, Weiser, Idaho 83672 (telephone: 208-549-0922; fax: 208-549-8329), to undertake actions that will increase the populations of southern Idaho ground squirrels (*Spermophilus brunneus endemicus*). In accordance with the Agreement, the agencies and Soulen Livestock have developed this Site-Specific Southern Idaho Ground Squirrel Management Plan (site-specific plan) for Soulen Livestock's lands in Washington and Payette Counties, Idaho. This site-specific plan will describe a series of conservation actions that Soulen Livestock and the agencies will undertake or support, including: translocation of southern Idaho ground squirrels from other lands, designed to reintroduce the species to areas that it historically occupied, and enhancement and/or protection of existing ground squirrel populations and habitat on Soulen Livestock's property.

Approval of the Agreement and this site-specific plan by the agencies and Soulen Livestock will commit the parties to various roles and responsibilities identified in the Agreement and this site-specific plan. As specified in the Agreement, Soulen Livestock will receive a Section 10(a)(1)(A), permit authorizing incidental take of southern Idaho ground squirrels, as a result of activities specified in this site-specific plan, should the species be listed as "threatened" or "endangered" pursuant to the ESA. As specified in the Agreement, and consistent with agency policies and applicable laws and regulations, Soulen Livestock will be given regulatory assurances under the ESA that no further commitment of land, water or other resources and no further limitations on land uses will be imposed if the species is listed under the ESA, so long as the terms of this site-specific plan, the Agreement, and the permit are being implemented and complied with. Finally, Soulen Livestock shall be eligible for incentive payments for the commitment of the company's lands to the reintroduction of the species and protection of its habitat as further specified in this site-specific plan.

II. Description of the Enrolled Lands

The enrolled lands to be included in the Agreement and this site-specific plan are the approximately 43,145 acres belonging to Soulen Livestock within Washington and Payette Counties, Idaho (Figure 1). These lands lie generally to the west and south of Crane Creek Reservoir and are referred to as the "Lower Ranch", the "Center Ranch", the "Upper Ranch", and the "Cinnabar Ranch". The enrolled lands will be further identified in this site-specific plan in three categories: (1) lands occupied by the species through transplanting from other sites, (2) lands occupied by the species naturally, and (3) lands with no currently verified populations of southern Idaho ground squirrels. Lands will move from category 3, to 1 or 2 based on updated ground squirrel survey information and future reintroduction efforts. For lands in the first two categories, ground squirrel "protected areas" will be designated by mutual agreement among Soulen Livestock and the agencies, and identified, both on the ground and on maps attached to this site-specific plan. The protected areas will be managed according to this site-specific plan and shall be no smaller than 5 acres and no larger than 40 acres in size, unless agreed upon by the parties.

The total acreage of enrolled lands is 43,145 acres containing a total of three southern Idaho ground squirrel protected areas at this time, covering 30 acres. Currently, there are 10 acres of category 1 lands, 20 acres of category 2 lands, and 43,115 acres of category 3 lands covered under the Agreement and site-specific plan. Site-specific maps of each protected area are presented below.

The enrolled lands are part of Soulen Livestock's ranching operation. Over 95% of the 43,145 acres of enrolled lands are shrub/grassland habitat used for cattle and sheep grazing at various times of the year. Approximately 1,436 acres are lowland areas farmed primarily for hay (alfalfa) production for livestock feed; livestock grazing in these and some immediately adjacent upland areas is minimal or absent. The condition and grass species composition of the upland shrub/grassland habitat is variable. Sagebrush is common in most areas, but grass cover varies from areas dominated by native bunchgrasses to areas dominated by cheatgrass and medusahead. The alfalfa hayfields are, or could be, important to ground squirrels as a food source. Most of the enrolled lands appear to be, or with habitat modification could be, suitable southern Idaho ground squirrel habitat.

Very little of the enrolled lands have been surveyed for ground squirrels. During the spring of 2001, FWS and IDF&G personnel conducted general surveys at four sites (Upper, Lower, Center, and Cinnabar Ranch sites). Southern Idaho ground squirrels or their burrows were observed at two sites (Upper and Cinnabar Ranch sites) on Soulen Livestock's enrolled lands. During June, 2001, the FWS and IDF&G translocated 59 southern Idaho ground squirrels from the Rolling Hills Golf Course in Weiser to suitable, unoccupied habitat at the Lower Ranch site. A description of ground squirrel population and habitat conditions are given below under the discussion of each of the three ground squirrel protected areas. Once ground squirrel surveys are conducted by the FWS and IDF&G on the other enrolled lands, it is expected that other sites occupied by ground

squirrels or unoccupied sites suitable for translocating ground squirrels will be located. These surveys will be funded by the agencies, to the extent that funds are available.

III. Covered Activities

The activities of Soulen Livestock to be covered by this site-specific plan and the permit include:

Livestock operations—including grazing, herding of sheep and cattle, calving and lambing, placement of salt, supplemental feeding, accessing water or the development of watering sources, maintenance of camps and temporary housing for employees, predator control by either employees, guests or public agencies, gathering and shipping cattle or sheep, fencing projects, and the disposal of dead animals.

Farming operations—including plowing or cultivation of pastures and hay fields, irrigation, clearing or burning of ditch banks, weed control, and harvests and storage of hay or other products.

Fee-based recreation—otherwise legal hunting and fishing, the use of recreational vehicles both on and off established roads, camping and hiking. The shooting, trapping, poisoning, or possession of southern Idaho ground squirrels are not authorized by the permit.

IV. Duration

This site-specific plan and the Section 10 permit authorizing incidental take of southern Idaho ground squirrels shall be in effect for twenty (20) years from the date of the issuance of the permit.

V. Conservation Measures to be Employed

General:

Soulen Livestock agrees to undertake these management actions, with these anticipated benefits to the species:

1. For lands where ground squirrels will be reintroduced/transplanted, or for lands where there are known populations of the species (i.e. category 1 or 2 lands), protect both individual animals and their habitat from land use activities that may adversely affect the population of ground squirrels. These lands would also include the ground squirrel protected areas identified below and any additional protected areas identified in the future.

This provision would protect areas identified on the attached maps and which are, or may be, occupied by translocated southern Idaho ground squirrels, by excluding activities that may adversely affect the species or its habitat. These

activities shall also be excluded in areas where there are known, existing populations of ground squirrels, whether or not they have been translocated, and which may not be known at the time of the approval of this site-specific plan, but identified in the future. Such excluded activities on these lands include, at a minimum, shooting, trapping and poisoning of southern Idaho ground squirrels. If necessary, other excluded activities will be identified below for each protected area or other areas supporting ground squirrels. This provision would protect ground squirrels and their habitat within protected areas and other areas that are actively supporting ground squirrels and provide areas from which the ground squirrel population could expand to adjacent lands outside of the identified protected areas. At this time, under this provision, 30 acres out of the 43,145 acres of enrolled lands will be managed under the set of site-specific measures identified below for the Lower, Upper, and Cinnabar Ranch sites. The measures identified for each of these sites are intended to minimize impacts to ground squirrels from Soulen Livestock's land use activities and to implement ground squirrel habitat enhancement and other measures to increase and expand the populations.

2. For lands identified on the maps and below as ground squirrel "protected areas", Soulen Livestock will carry out and/or allow the agencies to carry out all conservation and effectiveness and compliance monitoring measures identified in the Agreement and below for each protected area, including any measures identified by Soulen Livestock and the agencies in the future for additional protected areas.

3. For lands with known populations of southern Idaho ground squirrels, allow IDF&G and FWS personnel access to the property to conduct ground squirrel conservation activities such as habitat enhancement, artificial feeding, ground squirrel surveys, and translocation of excess ground squirrels should the current population expand beyond the protected areas.

During the term of this site-specific plan, FWS and the IDF&G will likely find it advantageous to: modify or improve habitats within the shrub/steppe lands by adding rock, logs or other structures for cover or borrowing sites, planting or fertilizing desirable vegetation species, and identifying additional occupied ground squirrel sites. In addition, these agencies may wish to supplement food or nutritional sources, provided such additions pose no risks to livestock that may use the area. These activities would be intended to enhance the southern Idaho ground squirrel population or habitat and have direct benefits to the species.

4. If appropriate and where necessary, develop signs to discourage shooting of ground squirrels by other parties.

Shooting of ground squirrels by other parties could be a threat to the species in the area of the enrolled lands. It may be possible to reduce the potential for shooting mortality by placing signs or using other methods to discourage shooting.

5. For lands where there are no known populations of southern Idaho ground squirrels (i.e. category 3 lands), Soulen Livestock's activities will be covered under the permit. On all category 3 lands, no shooting, trapping or poisoning of southern Idaho ground squirrels will be authorized by Soulen Livestock. The section 10 permit issued to Soulen Livestock will cover incidental take of southern Idaho ground squirrels that may occur on these lands from the activities identified in part III, above. The section 10 permit will also authorize incidental take of southern Idaho ground squirrels that may occur within category 1 and 2 lands, and ground squirrel protected areas consistent with the Site-Specific Land Management Measures for Ground Squirrel Protected Areas and other site-specific measures identified below.

Soulen Livestock will allow IDF&G and FWS personnel access to category 3 lands to conduct ground squirrel surveys, and will help assure that its employees recognize likely populations of ground squirrels so that they can be verified. Newly identified ground squirrel populations will be protected in accordance with general provision V. 1. above and, if appropriate, identified as ground squirrel protected areas. Subject to the agencies' funding obligations in part VI., below, suitable, but unoccupied ground squirrel habitat areas identified by the agencies as reintroduction/translocation sites, will be protected in accordance with general provision V. 1., above, and identified as ground squirrel protected areas. The site-specific protection measures will be identified and implemented by Soulen Livestock and the agencies as soon as necessary following discovery of an occupied site, but no longer than one year from discovery of the occupied site; protection measures will also be identified and implemented prior to reintroducing/translocating ground squirrels to a site. Soulen Livestock and the agencies will cooperate in good faith to develop adequate site-specific southern Idaho ground squirrel protection measures at all ground squirrel occupied sites and reintroduction/translocation sites. If the parties cannot reach agreement on these measures, and the FWS determines the measures will not meet intended conservation benefits, Soulen Livestock will be found to not be in compliance with the conditions of the permit and the FWS will retain the authority to immediately suspend the permit at its sole discretion, consistent with current regulations described in 50 CFR 13.27 (a), and Soulen Livestock will retain the option of terminating the permit.

The parties to this site-specific plan recognize the limitations to the surveys for southern Idaho ground squirrels. Over the first six years of the Agreement, suitable habitats on the enrolled lands will be surveyed by the FWS and IDF&G with the goal of finding all additional populations of the species and potential reintroduction/translocation sites. Soulen Livestock will allow the FWS and IDF&G to conduct ground squirrel surveys, and will inform its employees of the potential for finding additional populations of southern Idaho ground squirrels and provide training in how to identify the species. If suspected populations are found, Soulen Livestock will notify FWS and IDF&G for verification. Upon verification of southern Idaho ground squirrels at the site by the FWS or IDF&G, or identification of reintroduction/translocation site(s) by the agencies, the agencies and Soulen Livestock will develop management measures to apply to the

new population site consistent with general provision V. 1., above. At a minimum, the conservation measures at these sites will include provisions to protect ground squirrels and their habitat from land use activities that may adversely affect the population. Conservation measures will be identified and implemented as soon as necessary, but no longer than one year following discovery of an occupied site, and prior to reintroducing/translocating ground squirrels to a site.

Southern Idaho ground squirrels will be conserved by allowing for additional surveys and protection of ground squirrel populations found, or reintroduced/translocated, over the duration of this site-specific plan. This provision will also provide for regulatory certainty to minimize disruption of Soulen Livestock's land use activities. Over the 43,115 acres of current category 3 lands, Soulen Livestock will not authorize any shooting, trapping or poisoning of southern Idaho ground squirrels, and site-specific conservation measures will be developed and implemented in a timely manner at all sites that are subsequently found to be occupied by southern Idaho ground squirrels or sites identified by the agencies as reintroduction/translocation sites.

Due to the lack of southern Idaho ground squirrel surveys over most of the enrolled lands, the parties recognize the uncertainty, at this time, of specifically what conservation measures will be implemented at sites within the 43,115 acres of category 3 lands that are subsequently identified as ground squirrel-occupied lands or unoccupied lands subsequently identified as reintroduction/translocation sites. It is likely that these conservation measures will be similar to those identified below for the Lower, Cinnabar, and Upper Ranch sites, but given the wide range of ground squirrel-related biological conditions and land use constraints that could occur at various sites across these lands, it is unreasonable to specify specific measures at this time. Therefore, to ensure that, during implementation of this Agreement, this provision will satisfy the Agreement's intent for adequate ground squirrel conservation and land use needs for the landowner, the FWS can ultimately suspend the permit if it finds that these measures are not adequate to conserve southern Idaho ground squirrels, and Soulen Livestock can terminate the permit if the conservation measures are incompatible with their land use objectives.

Site-Specific Land Management Measures for Ground Squirrel Protected Areas:

Lower Ranch Site ~ This southern Idaho ground squirrel "protected area" is 10 acres in size and identified in Figure 2. During May, 2001, the IDF&G and FWS translocated 59 southern Idaho ground squirrels from the Rolling Hills Golf Course to this site. Previous to this translocation effort, general ground squirrel surveys indicated this site was not occupied by ground squirrels, but did have suitable habitat. The area consists of an irrigated alfalfa hay field, bordered by sagebrush grassland and other grassland upland habitat. A spring-fed creek flows through the valley. The site contains several fences and a livestock corral complex. The site was chosen as a ground squirrel reintroduction

site based on the presence of bulbous bluegrass and alfalfa has an adequate food source, the occurrence of the fence and corral system and adjacent sagebrush as hiding cover, and desirable soil and substrate. The site was prepared for reintroduction of ground squirrels by: augering multiple holes throughout the area for escape burrows, placing temporary hiding cover in the form of used wood pallets in the area, removing some dense residual vegetation cover, and scattering a sunflower seed mix in the area for a supplemental food source. A Columbian ground squirrel population site is located near the farmhouse at the Lower Ranch in the next valley to the northeast of the translocation site.

Land use activities that would occur at this site would generally be related to alfalfa hay production and the sorting and movement of livestock through the corral system. Most activities related to these uses would likely be beneficial to ground squirrels because they would maintain the alfalfa in a desirable forage condition for ground squirrels and provide ground disturbance at the corral site, thereby reducing vegetation density and maintaining early succession vegetation species. Land use activities that could be detrimental to ground squirrels at this site have been identified and excluded by the conservation measures identified below.

In addition to the translocation effort discussed above, the following conservation measures will be applied to this 10-acre site beginning in the spring of 2002:

1) Soulen Livestock authorizes, if necessary, the IDF&G and FWS to continue translocation of additional ground squirrels to the Lower Ranch site.

2) The IDF&G and FWS will conduct vegetation species composition and other habitat surveys necessary to identify ground squirrel food sources and inform decisions related to habitat enhancement.

3) The IDF&G and FWS will implement habitat enhancement measures outside of the hayfield area, if necessary, based on habitat surveys. Habitat enhancement could include: seeding native or non-native vegetation species, fertilizing, prescribed burning, and providing rock jacks, woody debris or other material suitable for ground squirrel escape cover. These specific measures will be developed cooperatively between Soulen Livestock and the agencies.

4) Soulen Livestock will cooperate with the agencies to minimize direct mortality of ground squirrels from plowing, cultivating, or other ground-disturbing activities related to hay production at the Lower Ranch Site and on adjacent lands should ground squirrels expand beyond these areas. Incidental take of two ground squirrels per year is authorized. If two southern Idaho ground squirrels are determined to have been incidentally taken at the Lower Ranch site, the FWS and Soulen Livestock will identify and implement additional protective measures to minimize any further incidental take. For example, measures to minimize direct ground squirrel mortality could include timing of plowing, translocation of ground squirrels, or other measures.

5) If appropriate, the IDF&G and FWS will provide supplemental food for ground squirrels.

6) If appropriate, the IDF&G and FWS will control use of the site by Columbian ground squirrels and badgers.

7) No shooting, trapping or poisoning of southern Idaho ground squirrels.

8) No use of rodenticides.

9) No plowing or other mechanical ground cultivating activities that are inconsistent with measures developed in #4 above, to minimize direct mortality of ground squirrels.

10) No application of pesticides without coordination of procedures (i.e., pesticides to be used, application rates, timing, etc.) with the FWS and IDF&G.

11) No maintenance of camps and temporary housing for employees.

12) No burning of vegetation between April 1 and July 31 each year.

13) Signs will be placed at appropriate locations with the notification that shooting, trapping or poisoning ground squirrels is prohibited.

These measures are expected to maximize the chance that the reintroduced population of southern Idaho ground squirrels will become established. The measures directly address habitat needs of southern Idaho ground squirrels as well as minimizing effects from land use activities, direct mortality from shooting, trapping or poisoning, competition from Columbian ground squirrels and predation.

An intensive ground squirrel population census, as described in the Agreement, will be conducted at this site. This census will be used to monitor success of the translocation effort and progress of any habitat enhancement measures applied at the site. Habitat monitoring will be conducted at the site, as described in the Agreement, to monitor success of any habitat enhancement measures. Ground squirrel population and monitoring information can be used to evaluate effectiveness of conservation measures, and for any of the parties to propose adaptive management changes to these measures.

Cinnabar Site ~ This southern Idaho ground squirrel "protected area" is 10 acres in size and identified in Figure 3. During the spring of 2001, agency biologists conducted a general ground squirrel survey and found several active southern Idaho ground squirrel burrows within suitable habitat. Based on the number of burrows observed, an estimate was made of between 1 and 5 individual southern Idaho ground squirrels occupying the site. Columbian ground squirrels were also located in the area around a haystack. The area consists of a livestock corral/hay storage complex bordered by an alfalfa hay field and a Conservation Reserve Program (CRP) field. Upland, non-cultivated areas are

sagebrush grassland habitat. The specific area occupied by southern Idaho ground squirrels was adjacent to the corral area at an abandoned homesite, in and around an old rock wall.

Similar to the Lower Ranch site, land use activities that would occur at this site would generally be related to hay production and the feeding, sorting and movement of livestock through the corral system. Most activities related to these uses would likely be beneficial to ground squirrels because they would maintain the alfalfa in a desirable forage condition for ground squirrels and provide ground disturbance at the corral site, thereby reducing vegetation density and maintaining early successional vegetation species. Land use activities that could be detrimental to ground squirrels at this site have been identified and excluded by the conservation measures identified below.

The following conservation measures will be applied to this 10-acre site beginning in the spring of 2002:

1) The IDF&G and FWS will conduct ground squirrel surveys within the site to estimate the number and determine the location of both southern Idaho ground squirrels and Columbian ground squirrels.

2) The IDF&G and FWS will conduct vegetation species composition and other habitat surveys necessary to identify ground squirrel food sources to make informed decisions related to habitat enhancement.

3) The IDF&G and FWS will implement habitat enhancement measures based on habitat surveys. Habitat enhancement could include: seeding native or non-native vegetation species, fertilizing, prescribed burning, and providing rock jacks, woody debris or other material suitable for ground squirrel escape cover. These specific measures will be developed cooperatively between Soulen Livestock and the agencies.

4) Soulen Livestock will cooperate with the agencies to minimize direct mortality of ground squirrels from plowing, cultivating, or other ground-disturbing activities within the Cinnabar site and on adjacent lands should ground squirrels expand beyond these areas. Incidental take of two ground squirrels per year is authorized. If two southern Idaho ground squirrels are determined to have been incidentally taken at the Cinnabar site, the FWS and Soulen Livestock will identify and implement additional protective measures to minimize any further incidental take. For example, measures to minimize direct ground squirrel mortality could include timing of plowing, translocation of ground squirrels, or other measures.

5) If appropriate, the IDF&G and FWS will provide supplemental food for ground squirrels.

6) If appropriate, the IDF&G and FWS will control use of the site by Columbian ground squirrels and badgers.

7) No shooting, trapping or poisoning of southern Idaho ground squirrels.

8) No use of rodenticides.

9) No plowing or other mechanical ground cultivating activities that are inconsistent with measures developed in #4 above, to minimize direct mortality of ground squirrels.

10) No application of pesticides without coordination of procedures (i.e., pesticides to be used, application rates, timing, etc.) with the FWS and IDF&G.

11) No maintenance of camps and temporary housing for employees.

12) No burning of vegetation between April 1 and July 31 each year.

13) Signs will be placed at appropriate locations with the notification that shooting, trapping or poisoning ground squirrels is prohibited.

14) Soulen Livestock will leave the rock wall in place to provide hiding cover for ground squirrels.

These measures are expected to maximize the chance that the population of southern Idaho ground squirrels at the Cinnabar site will increase and be self-sustaining. The measures directly address habitat needs of southern Idaho ground squirrels as well as minimizing effects from land use activities, direct mortality from shooting, trapping or poisoning, competition from Columbian ground squirrels and predation.

An intensive ground squirrel population census, as described in the Agreement, will be conducted at this site. This census will be used to monitor response of the ground squirrel population to management measures applied at the site. Habitat monitoring will be conducted at the site, as described in the Agreement, to monitor success of any habitat enhancement measures. Ground squirrel population and monitoring information can be used to evaluate effectiveness of conservation measures, and for any of the parties to propose adaptive management changes to these measures.

Upper Ranch Site ~ This southern Idaho ground squirrel "protected area" is 10 acres in size and identified in Figure 4. During the spring of 2001, agency biologists conducted a general ground squirrel survey and found several active southern Idaho ground squirrel burrows within suitable habitat. Based on the number of burrows observed, an estimate was made of between 5 and 15 individual southern Idaho ground squirrels occupying the site. The area consists of a livestock feeding and corral/hay storage complex bordered by alfalfa hay and cereal grain crop fields. Upland, non-cultivated areas are sagebrush grassland habitat.

Land use activities that would occur at this site would generally be related to hay production and the feeding, sorting and movement of livestock through the corral system. Most activities related to these uses would likely be beneficial to ground squirrels because they would maintain the alfalfa in a desirable forage condition for ground squirrels and provide ground disturbance at the corral site, thereby reducing vegetation density and maintaining early succession vegetation species. Land use activities that could be detrimental to ground squirrels at this site have been identified and excluded by the conservation measures identified below.

The following conservation measures will be applied to this 10-acre site beginning in the spring of 2002:

1) The IDF&G and FWS will conduct ground squirrel surveys within the site to estimate the number and determine the location of southern Idaho ground squirrels and determine whether or not Columbian ground squirrels occur in the area.

2) The IDF&G and FWS will conduct vegetation species composition and other habitat surveys necessary to identify ground squirrel food sources and to make informed decisions related to habitat enhancement.

3) The IDF&G and FWS will implement habitat enhancement measures based on habitat surveys. Habitat enhancement could include: seeding native or non-native vegetation species, fertilizing, prescribed burning, and providing rock jacks, woody debris or other material suitable for ground squirrel escape cover. These specific measures will be developed cooperatively between Soulen Livestock and the agencies.

4) Soulen Livestock will cooperate with the agencies to minimize direct mortality of ground squirrels from plowing, cultivating, or other ground-disturbing activities within the Upper Ranch site and on adjacent lands should ground squirrels expand beyond these areas. Incidental take of two ground squirrels per year is authorized. If two southern Idaho ground squirrels are determined to have been incidentally taken at the Upper Ranch site, the FWS and Soulen Livestock will identify and implement additional protective measures to minimize any further incidental take. For example, measures to minimize direct ground squirrel

mortality could include timing of plowing, translocation of ground squirrels, or other measures.

5) If appropriate, the IDF&G and FWS will provide supplemental food for ground squirrels.

6) If appropriate, the IDF&G and FWS will, control use of the site by Columbian ground squirrels and badgers.

7) No shooting, trapping or poisoning of southern Idaho ground squirrels.

8) No use of rodenticides.

9) No plowing or other mechanical ground cultivating activities that are inconsistent with measures developed in #4 above, to minimize direct mortality of ground squirrels.

10) No application of pesticides without coordination of procedures (i.e., pesticides to be used, application rates, timing, etc.) with the FWS and IDF&G.

11) No maintenance of camps and temporary housing for employees.

12) No burning of vegetation between April 1 and July 31 each year.

13) Signs will be placed at appropriate locations with the notification that shooting, trapping or poisoning ground squirrels is prohibited.

These measures are expected to maximize the chance that the population of southern Idaho ground squirrels at the Upper Ranch site will increase and be self-sustaining. The measures directly address habitat needs of southern Idaho ground squirrels as well as minimizing effects from land use activities, direct mortality from shooting, trapping or poisoning, competition from Columbian ground squirrels and predation.

An intensive ground squirrel population census, as described in the Agreement, will be conducted at this site. This census will be used to monitor response of the ground squirrel population to management measures applied at the site. Habitat monitoring will be conducted at the site, as described in the Agreement, to monitor success of any habitat enhancement measures. Ground squirrel population and monitoring information can be used to evaluate effectiveness of conservation measures, and for any of the parties to propose adaptive management changes to these measures.

This section will be amended over the term of the plan based on new ground squirrel population sites and/or protected areas being identified, and/or if changes are needed in the site-specific measures identified above. Modifications will be done cooperatively between Soulen Livestock and the agencies.

VI. Funding and Incentive Payments

With available funds, the agencies will pay Soulen Livestock for each site where populations of ground squirrels will be reintroduced/translocated. To provide an incentive for Soulen Livestock to allow translocation of southern Idaho ground squirrels on their land where there would otherwise be no or few ground squirrels, payments will be $3,500 per site in a one-time payment.

In the event Soulen Livestock needs to sell any enrolled lands prior to the full term of this Agreement, they will notify the FWS at least 60 days in advance of the potential sale, and notify the prospective landowner of the existence of the Agreement, the permit and this site-specific plan (and/or have previously recorded the permit, Agreement and site-specific plan) in order for the potential new owner to decide whether to continue this Agreement, permit and site-specific plan. In the event the new landowner does not wish to continue this Agreement and request transfer of the permit pursuant to 50 CFR 13.25(b), Soulen Livestock terminates the Agreement or site-specific plan for other reasons, or the FWS suspends or revokes the permit, Soulen Livestock will reimburse the agencies a pro-rated amount, calculated as: the sum of the incentive payments made to date, divided by the term of the permit, and multiplied by the number of years remaining under the permit. Reimbursement is not required for any funds used by Soulen Livestock for completed ground squirrel habitat enhancement projects. If the new landowner does not become a party to this or a similar Agreement and the permit is not transferred or a new permit is not issued, he/she will not receive the benefits of the permit authorizing incidental take of southern Idaho ground squirrels.

In addition, the agencies, in a manner mutually agreeable to them, will bear the following costs:

- Labor and materials for fencing, providing for alternate livestock watering areas, seeding, purchasing hay, or other land management actions deemed necessary by Soulen Livestock and the agencies to benefit southern Idaho ground squirrel habitat or populations. Providing alternate water sources, seeding, and fertilizing could be used to directly improve vegetation quantity and quality for use by ground squirrels. Purchasing hay could be used in some cases to compensate landowners from alfalfa damage caused by ground squirrels.

- Labor and materials for enhancement of habitat or other measures deemed necessary by the agencies.

- Funding for other, currently unforeseen, habitat conservation or other measures deemed by the agencies to be beneficial to southern Idaho ground squirrels.

Nothing in this Agreement prevents the agencies from obligating additional funding for the Agreement and this site-specific plan in the future.

VII. Monitoring and Reporting

The IDF&G and the FWS will be responsible for effectiveness monitoring and reporting related to the Agreement and this site-specific plan, and the FWS will be responsible for monitoring compliance with the Agreement and this site-specific plan. Within six years of Agreement approval, the FWS and IDF&G will conduct southern Idaho ground squirrel occupancy surveys of the enrolled lands to identify all occupied sites and potential reintroduction/translocation sites.

The FWS will prepare annual reports concerning implementation of the Agreement and this site-specific plan. Information in annual reports will include, but is not limited to: (1) habitat management or other ground squirrel-related conservation activities conducted within the protected area(s) over the past year, (2) effectiveness of these management activities in meeting the desired results, (3) status of habitat or other ground squirrel management actions conducted in previous years, (4) results of ground squirrel population and productivity surveys, if any, on the enrolled lands, (5) the results of any ground squirrel translocation efforts, and (6) recommendations for future ground squirrel management activities consistent with the Agreement and site-specific plan. Reports will be due February 1 of each year and a copy will be made available to Soulen Livestock and to the agencies.

VIII. References

U.S. Fish and Wildlife Service and National Marine Fisheries Service.1999. Announcement of Final Policy for Candidate Conservation Agreements with Assurances. Federal Register 64(116):32726-32736.

IN WITNESS WHEREOF THE PARTIES HERETO have executed this Agreement and Site-Specific Southern Idaho Ground Squirrel Management Plan for Soulen Livestock Company to be in effect as of the date that the FWS issues the permit.

Soulen Livestock Company, Inc.

Idaho Department of Fish and Game

Idaho Office of Species Conservation

U.S. Fish and Wildlife Service

SEP 29 2002