

1. Minimize the potential for disrupting Bliss Rapids snail habitat from Program implementation.
2. Minimize the risk of harm and mortality to the Bliss Rapids snail.

#### **7.6.4 Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the Agencies must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting and monitoring requirements. These terms and conditions are non-discretionary.

- 1a. As needed during any dewatering, the Agencies will identify for contractors where pump water from the dewatered area will be disposed. All necessary measures (e.g., settling ponds) will be taken to ensure that no sediment from pump water will reach Bliss Rapids snail habitat.
- 1b. All erosion and sediment control measures will be maintained until construction is complete and disturbed areas are stabilized.
2. Prior to conducting any in-channel or bank stabilization work in Bliss Rapids snail habitat (especially spring habitat) contact the Service for additional specific information on the distribution of the Bliss Rapids snail and the need for implementing additional protection measures.

#### **7.6.5 Reporting and Monitoring Requirement**

In order to monitor the impacts of incidental take, the Federal agency or any applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement (50 CFR 402.14 (i)(3)).

1. As part of the process for implementing the Program, the Department is required to provide appropriate post-Project Monitoring Forms to the Service within 45 days of project completion. The Department will also host an annual coordination meeting to review the projects implemented under the Program during the previous year.
2. During project implementation, the Agencies shall promptly notify the Service of any emergency or unanticipated situations arising that may be detrimental for the Bliss Rapids snail relative to the proposed Program.

#### **7.7 Conservation Recommendations**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery programs, or to develop new information on listed species.

1. Whenever concrete is used, restrict washout of concrete trucks and equipment to locations that will minimize the risk of introducing wastewater to Bliss Rapids snail habitat.

2. Take all necessary precautions to avoid introducing petroleum contaminants to Bliss Rapids snail habitat.

## **8. NORTHERN IDAHO GROUND SQUIRREL**

### **8.1 Status of the Species**

#### **8.1.1 Listing Status**

The northern Idaho ground squirrel (NIDGS) was listed as threatened under the Act on April 5, 2000 (65 Federal Register 17,779-17,786). On July 28, 2003, the Service approved a Recovery Plan (Fish and Wildlife Service 2003) that provides direction for recovery of the species, including population sizes and criteria for a minimum number of viable metapopulations.

The Recovery Plan identifies 12 existing and potential metapopulation sites. The exact boundaries of these sites are considered somewhat fluid and will be revised as new surveys, habitat, and population information becomes available. The metapopulation sites include lands administered by the U.S. Forest Service, the Idaho Department of Lands, and private landowners. To date, one Habitat Conservation Plan and one Safe Harbor Agreement with private landowners have been completed for this species (Fish and Wildlife Service 2006 and 2007).

#### **8.1.2 Reasons for Listing**

Section 4 of the Act and regulations promulgated to implement the listing provisions of the Act (50 CFR part 424) set forth the procedures for adding species to the Federal list. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1) of the Act. All five factors apply to the NIDGS: the present or threatened destruction, modification, or curtailment of its habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of existing regulatory mechanisms; and other natural or manmade factors affecting its continued existence.

#### **8.1.3 Species Description**

The NIDGS belongs to the small-eared group of true ground squirrels. Yensen (1991, p. 583) described the NIDGS as taxonomically distinct from the southern Idaho subspecies (*Spermophilus brunneus endemicus*) based on morphology, fur, and apparent life-history differences, including biogeographical evidence of separation. The NIDGS occurs only in west-central Idaho in Adams and Valley Counties. It has a reddish brown back with faint light spots and a cream-colored belly. The back of the legs, top of the nose, and underside of the base of the tail are all reddish brown. The NIDGS have ear pinnae that project slightly above the crown of the head (Yensen and Sherman 2003, p. 3). The NIDGS can be distinguished from the other subspecies, the southern Idaho ground squirrel, and other small-eared ground squirrels, by its smaller size and rustier fur color.

Recent work suggests that southern Idaho ground squirrels may be descended from NIDGS, and the NIDGS population in Round Valley may be the common link between the two subspecies (Hoisington 2007, pp. 100-101). Hoisington (2007) used the cohesion species concept to test whether genetic and ecological data support species level classification of the two subspecies of

Idaho ground squirrel. Her results support not only the subspecies distinction, but also support raising the two subspecies to species status (Hoisington 2007, p. 99-104).

#### **8.1.4 Life History**

The NIDGS occupies dry (or xeric) meadows surrounded by ponderosa pine (*Pinus ponderosa*) or Douglas-fir (*Pseudotsuga menziesii*) forests (Yensen 1991, p. 595). Xeric meadows have shallow soils (Dyni and Yensen 1996, p. 99). However, NIDGS sites need to be deep enough to accommodate nest burrows greater than 3.3 feet deep (Yensen et al. 1991, p. 98, Yensen and Sherman 1997, p. 3); dry vegetation sites with shallow soils of less than 19.5 inches depth above bedrock are used for auxiliary burrow systems (Yensen et al. 1991, p. 95). NIDGS often dig burrows under logs, rocks, or other objects.

Although Columbian ground squirrels (*Spermophilus columbianus*) overlap in distribution with the NIDGS (Dyni and Yensen 1996, p. 99), Columbian ground squirrels prefer moister areas with deeper soils. Sherman and Yensen (1994, pp. 8, 11) reported that the segregation of the two species is due to competitive exclusion as opposed to differing habitat requirements.

The NIDGS emerges in late March or early April and is active above ground until late July or early August (Yensen 1991, p. 593). Emergence during this period begins with adult males, followed by adult females, and then yearlings. The NIDGS becomes reproductively active within the first two weeks of emergence (Yensen and Sherman 1997, p. 3). Females and males are sexually mature the first spring after birth. Females produce one litter per year of between two and seven pups, depending on fitness. Males and females do not live together or near their mates, and females do not cooperate with close kin to defend burrows or rear young (Yensen and Sherman 1997, p. 4).

Females that survive the first winter live, on average, nearly twice as long as males (3.2 years for females and 1.7 years for males). Estimates of maximum longevity indicate that males may live up to 5 years and females up to or greater than 7 years (Sherman and Runge 2002, p. 2821). Males normally die at a younger age than females, typically from mortality associated with reproductive behavior. During the mating period, males move considerable distances in search of receptive females and often fight with other males for copulations, thereby exposing themselves to predation by raptors such as prairie falcons (*Falco mexicanus*), goshawks (*Accipiter gentilis*), and red-tailed hawks (*Buteo jamaicensis*). Significantly more males die or disappear during the two week mating period than during the rest of the 12 to 14 week period of above-ground activity (Sherman and Yensen 1994, p. 2). Seasonal torpor or hibernation generally occurs in early to mid-July for adult males and females, and late July to early August for juveniles (Yensen 1991, p. 593).

#### **8.1.5 Population Dynamics**

As a result of the factors described in the Life History section, and due to the small sizes of the remaining population sites, the NIDGS may have little resilience to naturally occurring events. Small populations are often vulnerable to climatic fluctuations and catastrophic events (Mangel and Tier 1994, pp. 607-614). In 1993, Gavin et al. (1999) developed a population viability simulation program using recruitment and death values recorded over 8 years from an intensively studied NIDGS population site. This model determined that all but 1 of 100 population sites could become extinct in less than 20 years. A 1999 population model developed by the U.S.

Geological Survey-Patuxent Wildlife Research Center, predicted that existing populations could become extinct within 7 years if no conservation measures are taken.

In a metapopulation system such as that of NIDGS, the extinction and re-colonization of local populations is perceived to be a natural occurrence. Some local populations may be larger and more robust than others because of the availability of suitable resources such as well drained soils, above-ground structure for cover, and diverse and nutritious food sources. These productive sites are often referred to as “source populations.” Areas that harbor less resource value may support small populations during periods of ideal climatic conditions but may not remain viable when climatic conditions further reduce the resource value. These sites are referred to as “sink populations” in that most of the animals that occur there arrive via dispersal from source sites (Meffe and Carroll 1994, pp. 186-189).

In general, larger local populations have a greater ability to persist through intermittent fluctuations in climate and food resources and can serve as source populations, through dispersal, for less viable populations or can re-colonize local populations that have gone extinct (Meffe and Carroll 1994, pp. 187-188). A necessity for this process to work is the connectivity among local populations, a characteristic that is now lacking across substantial portions of the NIDGS range. Sink populations, although potentially intermittently occupied, are valuable to the metapopulation as well. They can contribute genetic diversity and can serve as a bridge between other source populations that would otherwise lack connection.

For several years, population sites with the largest numbers of NIDGS have been closely monitored by researchers. These sites occur within the Payette National Forest (Slaughter Gulch campground) and the privately-owned OX Ranch. The two population sites on the OX Ranch (Squirrel Manor and Squirrel Valley) have been monitored for the longest period of time. Sherman and Gavin (1999, pp. 5-7) and Sherman and Runge (2002, p. 2819) documented the decline of the Squirrel Valley population from 272 individuals in 1987 to 10 in 1999. The Squirrel Manor had a population decline from 250 individuals in 1996 to fewer than 50 individuals in 1999. Each of four other population sites monitored between 1998 and 1999 declined markedly. The declines in 1999 may have been largely due to cold, spring conditions (Sherman and Gavin 1999, p. 2), whereas the longer-term declines may be related to declining habitat conditions.

Since 1999, IDFG has detected a generally increasing trend in NIDGS populations (Evans Mack and Bond 2008, p. 9). Of the monitored populations, only the Cold Springs population appears to be at or below the levels recorded in 1999; all other populations have increased. In addition to a general trend of an increasing number of NIDGS, new populations, or populations formerly believed to be extirpated, have been documented. Specifically, the Lost Valley Camp Ground and Tree Farm populations were either repopulated or redetected in 2000 and 2001, respectively. New populations were detected at the Lick Creek lookout in 2006, and at four additional sites in 2008. The overall population estimate for 2008 was 1,512 adults and yearlings; this estimate represents an increase over the 2007 population estimate and a marked increase from population estimates from 1999.

### **8.1.6 Status and Distribution**

The NIDGS is found only in Adams and Valley counties of western Idaho. It has the smallest geographic range of any squirrel subspecies and one of the smallest mammal ranges in North

America (Gill and Yensen 1992, p. 155). Its present range is north of Council, Idaho, with one location in Round Valley, and covers an area of about 230,000 acres. Within this extent, NIDGS are known to occur at 43 isolated sites within an elevation range of 1,312 to 7,565 feet (Evans Mack 2006, p. ii). Historically, its range probably was much larger and extended southeast to Round Valley near Cascade, Idaho. Of the 43 known occupied sites in 2006, five sites supported greater than 100 individuals (Squirrel Manor, Lost Valley, Price Valley, Price Valley South, and Round Valley), 22 of 43 sites supported less than 20 individuals, and three metapopulation areas (Price Valley, Lost Valley, and Bear Meadows Complex) supported greater than 200 individuals with two nearing 600 (Evans Mack 2006, p. ii). In 2008, 47 sites were occupied by NIDGS, and the population estimated at 1,512 adults and yearlings (Evans Mack and Bond 2008, p. 9). The largest colonies continue to occur at Squirrel Manor, Squirrel Valley, Lost Valley Reservoir, and Price Valley (Evans Mack and Bond 2008, p. 9).

### **8.1.7 Previous Consultations and Conservation Efforts**

The Service has conducted numerous informal and formal section 7 consultations with the Forest Service and other Federal agencies. With the exception of the Forest Service Forest Plan revision, the majority of these consultations were on site-specific actions such as timber sales, vegetation management actions, road maintenance and construction, and livestock grazing. To date, only one consultation authorizing incidental take has been issued (Council to Cuprum Road Construction). Due to the nature of the consultations completed to date (individually and in aggregate), these have not compromised the survival and recovery of the NIDGS. Land management on the Payette and Boise National Forests is considered critically important to the species and its habitat because these Forests constitute the primary Federal action agency with the potential to affect its survival and assist in recovery under section 7(a)(1) of the Act (Fish and Wildlife Service 2003) and a significant portion of NIDGS habitat and populations are on Forest Service land.

### **8.1.8 Conservation Needs**

A final Recovery Plan (Plan) for NIDGS was developed and released by the Service on July 28, 2003 (Fish and Wildlife Service 2003). The goal of this Plan is to increase the population size and establish a sufficient number of viable metapopulations of the NIDGS so the subspecies can be delisted. According to the Plan, due to the restricted geographic range and low numbers, the populations of NIDGS must be increased and stabilized. The only historical population level recorded was in 1985 when it was estimated to be approximately 5,000 individuals (Yensen 1985, p. 12). This estimate was made for populations judged to be in decline; hence, it is thought that the recovery target needs to be higher than this historical estimate (Fish and Wildlife Service 2003, p. v). The Plan states that the recovery target for the species is based on an effective population size ( $N_e$ ) of 5,000 among a minimum of 10 metapopulations. Delisting may be considered when four recovery criteria identified in the Plan have been met.

1. Of the 17 potential metapopulations that have been identified within the probable historical distribution, there must be at least 10 metapopulations, each maintaining an average effective population size of greater than 500 individuals for 5 consecutive years.
2. The area occupied by a minimum of 10 potential metapopulations must be protected. In order for an area to be deemed protected, it must be: (a) owned or managed by a

government agency with appropriate management standards in place; (b) managed by a conservation organization that identifies maintenance of the subspecies as the primary objective for the area; or, (c) on private lands with a long-term conservation easement or covenant that commits present and future landowners to the perpetuation of the subspecies.

3. Site-specific management plans have been completed for the continued ecological management of habitats for a minimum of 10 potential metapopulation sites.
4. A post-delisting monitoring plan covering a minimum of 10 potential metapopulation sites has been completed and is ready for implementation.

### **8.1.9 Critical Habitat**

No Critical Habitat for NIDGS has been designated.

## **8.2 Environmental Baseline of the Action Area**

This section assesses the effects of past and ongoing human and natural factors that have led to the current status of the species, its habitat and ecosystem in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area which have already undergone section 7 consultations, and the impacts of state and private actions which are contemporaneous with the consultations in progress.

### **8.2.1 Status of the NIDGS in the Action Area**

The Assessment states that two NIDGS occupied sites occur adjacent to highways administered by the Department (as of February 2010). The location of these sites is described as:

- S.H. 55 from Round Valley Road (north of Smith's Ferry) north to Herrick Hills Subdivision, mileposts 102 to 105.
- U.S. 95 from Tamarack (north of Lost Valley Road) north/east to almost the New Meadows city limits, mileposts 154 to 158.75.

### **8.2.2 Factors Affecting the NIDGS in the Action Area**

In general, the primary threats to NIDGS include habitat loss, degradation, and fragmentation due to conifer encroachment into meadow habitats, changes in vegetation composition and structure, agricultural conversions, and rural development. Other threats identified include mortality associated with roads, poisoning, illegal recreational shooting, competitive exclusion by the larger Columbian ground squirrel, and demographics of small populations (Fish and Wildlife Service 2003, p. iv).

## **8.3 Effects of the Proposed Action**

The implementing regulations for section 7 define "effects of the action" as "the direct and indirect effects of an action on the species together with the effects of other activities that are interrelated or interdependent with that action, which will be added to the environmental baseline" (50 CFR § 402.02). "Indirect effects" are caused by or result from the agency action, are later in time, but are still reasonably certain to occur. Indirect effects may occur outside of

the immediate footprint of the project area, but would occur within the action area as defined (50 CFR § 402.02).

### **8.3.1 Direct and Indirect Effects of the Proposed Action**

Program activities may impact the northern Idaho ground squirrel through a number of mechanisms. Program activities near any NIDGS-occupied sites will likely result in temporary disturbance of individual squirrels during their active season (April through early August). The effect of such disturbance will be a temporary alteration in an individual NIDGS's activity pattern (e.g., increased sheltering and decreased feeding). NIDGS may also be killed if ground disturbing work occurs when squirrels are in their burrows or if construction vehicles or equipment crush squirrels inadvertently when driving, working, or parking off the roadway.

The Agencies will implement the following protection measures to reduce impacts to the NIDGS:

1. Determine if a project is within or near known occupied NIDGS sites or modeled suitable habitat. NIDGS occurrence is dynamic across the landscape, and this distribution likely will change over time.
2. Conduct project-specific presence/absence surveys for the NIDGS within occupied sites or modeled suitable habitat prior to any ground-disturbing activities. Surveys should follow the protocol established by the Service and Idaho Department of Fish and Game, which specifies qualified individuals, timing, number of visits, weather considerations, etc. The prime survey periods are (1) shortly after adult/yearling emergence in spring when squirrels are breeding and not obscured by growing vegetation (beginning early April at lower elevations and adjusted accordingly by elevation and snow pack), and (2) after pup emergence in summer (beginning early June at lowest elevations). Ability to hear and recognize a northern Idaho ground squirrel call is important, as many times that is the first detection. This high-frequency call can be confused with grassland sparrow species, so it takes experience and no high-frequency hearing loss. Coordination with the Idaho Department of Fish and Game is helpful prior to conducting surveys.
3. At locations determined to be occupied (from project-specific surveys), schedule construction activities to reduce conflicts. Projects that involve excavation (e.g., working beyond the existing roadway, replacing culvers, widening, etc.) at or near occupied sites should be scheduled after pups have emerged and before adults retreat below ground to hibernate. This window occurs early June through the first week of July at lower elevations and is adjusted accordingly for higher elevations.
4. At locations determined to be occupied, monitor squirrel behavior during construction using a qualified individual. On-site monitoring during construction allows for adaptive modifications.
5. At locations determined to be occupied, restrict indiscriminate parking of vehicles and heavy machinery to existing disturbed areas. Conduct clearance surveys to designate parking and staging areas. Vegetated road edges should be avoided.
6. Conduct presence/absence surveys at material source sites and waste sites associated with projects if these locations occur in modeled habitat.

### **8.3.2 Effects of Interrelated or Interdependent Actions**

The Service has not identified any effects from interrelated or interdependent actions.

## **8.4 Cumulative Effects**

The implementing regulations for section 7 define cumulative effects to include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this Biological Opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The predominant ongoing activities on non-Federal lands that are reasonably certain to affect NIDGS and their habitat include timber harvest, livestock grazing, road construction, recreation, fire suppression, and residential development. Land uses also include limited amounts of cultivation and irrigation of hay fields and pastures, water diversions and water-right allocations, and residential development.

State and private land timber harvest and related road construction activities within Idaho are regulated by the Idaho Forests Practice Act (IFPA), under the Idaho Department of Lands (IDL). Activities that are implemented pursuant to the IFPA that may not provide adequate protection for NIDGS and their habitat include: road construction and maintenance, timber harvest, and fire management. Conversely, forest management that reduces tree stocking and increases openings could have a beneficial effect on the species. There is one known NIDGS colony on State land and several private tracts where these actions are reasonably certain to directly or indirectly affect ground squirrels.

There are pathways for both adverse and beneficial effects on ground squirrels from livestock grazing. State lands leased for grazing are currently operated under BMPs established under Grazing Management Plans, overseen by the IDL. Grazing BMPs as identified in the Idaho State Agricultural Pollution Abatement Plan (State Plan) are not mandatory but recommended for private lands. Because compliance with the State Plan is not required on private lands, no monitoring plan is in place to evaluate potential impacts to Act listed species or designated critical habitat. The IDL does perform monitoring of larger tracts of leased lands to ensure compliance with established grazing management plans. However, smaller, more isolated blocks of leased land are often not monitored for compliance and managed according to lands surrounding them (private or federal). Grazing management plans as currently required by IDL are authorized for ten-year terms, leading to an inability to incorporate new and more ecologically friendly practices as these practices evolve. State management plan BMPs typically revolve around season of use and animal unit months (AUMs), not focusing on riparian area monitoring and protection. Given the limited controls on grazing under state oversight, it is unlikely that management would be carried out to assure adverse effects on ground squirrels would be avoided and minimized.

As with timber management and grazing, recreation and fire management on non-Federal lands does not come with assurances of protection of listed species. The general nature of impacts of these activities on ground squirrels is described above. It is reasonably certain that adverse effects on the species could result from these activities. A number of ground squirrel colonies are located on private lands that are presently managed for agricultural uses. There is potential



from the development of parts of these properties for residential use, and subsequent loss of NIDGS habitat.

The Act provides options for non-Federal entities to develop conservation agreements and Habitat Conservation Plans that address management and development effects on candidate, proposed, and listed species. Landowners in the general vicinity of the action area have been working with the Service to conserve other species, including southern Idaho ground squirrel. It is possible that in the future, NIDGS may benefit from actions carried out under similar private/Federal agreements.

## 8.5 Conclusion

The Service has reviewed the current status of the NIDGS, the environmental baseline in the action area, effects of the proposed action, and cumulative effects, and it is our conclusion that the proposed action is not likely to jeopardize the continued existence of the NIDGS.

This determination is based upon the following considerations:

- Although the proposed action may have some adverse effects on a small number of individual NIDGS, these effects are not likely to cause a measurable response in NIDGS populations.
- Proposed Program protection measures are expected to reduce impacts to NIDGS from Program implementation.

Direct modifications to NIDGS habitat are expected to be limited and impacts to the extant populations would likely be minor. The Program will not reduce the reproduction, status, distribution, or genetics of NIDGS to a point where the likelihood of its survival and recovery is appreciably reduced.

There is no critical habitat designated for the NIDGS, therefore none will be affected.

## 8.6 Incidental Take Statement

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without specific exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm in the definition of take in the Act means an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying these species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering.

Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The Agencies have a continuing duty to regulate the activity covered by this incidental take statement. If the Agencies fail to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Agencies must report the progress of the Program and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

### **8.6.1 Amount or Extent of Take Anticipated**

While the protection measures incorporated into the Program are expected to minimize risk to NIDGS, the Service anticipates that take in the form of death or injury to individual NIDGS, and harassment of individual squirrels are reasonably certain to occur as a result of Program implementation. Calculation of the amount of incidental take that may occur is complicated by the annual variation in the potential numbers of NIDGS that may inhabit an area and uncertainty about exactly where Program activities will occur. We expect that Program activities will only impact NIDGS in two areas: (1) S.H. 55 from Round Valley Road (north of Smith's Ferry) north to Herrick Hills Subdivision, mileposts 102 to 105; and (2) U.S. 95 from Tamarack (north of Lost Valley Road) north/east to almost the New Meadows city limits, mileposts 154 to 158.75.

The Service predicts that two NIDGS may be killed during the 5 year period of Program implementation (one mortality in each of the affected areas described above). Program activities near any NIDGS-occupied sites will likely result in temporary disturbance of individual squirrels during their active season (April through early August). The effect of such disturbance will be a temporary alteration in an individual NIDGS's activity pattern (e.g., increased sheltering and decreased feeding). The amount of take in the form of harassment resulting from the Program is difficult to quantify due to the large number of variables involved in the interaction, however Program activities will likely only result in temporary, short-term disturbances to NIDGS. We will use the amount of potentially affected area as a surrogate for take in the form of harassment. We assume that all squirrels within an impact zone 100 feet on either side of S.H. 55 between MPs 102 and 105 (3 miles) and on either side of U.S. 95 between MP 154 and 159 (5 miles) may be subject to harassment from Program activities.

Authorized take will be exceeded if Program activities result in the death of more than two NIDGS during the 5 year implementation period or if squirrels are harassed outside of the two impact zones along S.H. 55 and U.S. 95 described above. If the incidental take anticipated by this document is exceeded, all such activities will cease and the Agencies will immediately contact the Service to determine if consultation should be reinitiated

### **8.6.2 Effect of the Take**

The Service has determined that the effects from Program implementation will not result in a level of take that will jeopardize the NIDGS. The proposed Program is not expected to significantly reduce the reproduction, status, and distribution of NIDGS in the action area, and will not appreciably reduce the likelihood of survival and recovery of the species. Further, the protection measures incorporated into the proposed Program have been designed to minimize the amount of take.

### **8.6.3 Reasonable and Prudent Measures**

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize the impacts of take on the NIDGS.

1. Minimize the potential for disruption of NIDGS habitat from Program implementation.
2. Avoid disturbing, injuring, or killing NIDGS.

### **8.6.4 Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the Agencies must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting and monitoring requirements. These terms and conditions are non-discretionary.

- 1a. Minimize the destruction of plant communities important for the conservation of the NIDGS.
- 1b. Where revegetation of areas disturbed by Program actions is required, use native plants important for NIDGS forage whenever feasible.
2. Based on the results of pre-project surveys and monitoring, adjust Program actions to avoid impacts to NIDGS. Examples of appropriate adjustments include stopping construction work if NIDGS are present during their above ground period (April through early August), restricting work to daylight hours only, or delineating NIDGS burrow systems to ensure that ground disturbing work does not occur in their vicinity.

### **8.6.5 Reporting and Monitoring Requirement**

In order to monitor the impacts of incidental take, the Federal agency or any applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement (50 CFR 402.14 (i)(3)).

1. As part of the process for implementing the Program, the Agencies are required to provide appropriate post Project Monitoring Forms to the Service within 45 days of project completion. For Program actions completed within NIDGS populations as described above in this Opinion, the Agencies will include the results of any pre-project NIDGS surveys or monitoring. In addition the Agencies will describe what types of adaptive management actions were implemented to avoid impacting NIDGS.
2. Upon locating any dead, injured, or sick NIDGS, or upon observing the death or injury of individual NIDGS as a result of project activities such activities shall be terminated and notification must be made within 24 hours to the Service's Division of Law Enforcement at (208) 378-5333. Additional protection measures may be developed through discussions with the Service.
3. During project implementation, the Agencies shall promptly notify the Service of any emergency or unanticipated situations arising that may be detrimental for NIDGS relative to the proposed Program.

## **8.7 Conservation Recommendations**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery programs, or to develop new information on listed species.

1. Work with the Service and IDFG to develop specific measures for minimizing impacts to NIDGS from Program implementation.
2. Develop revegetation plans for restoring NIDGS habitat in appropriate areas under Department jurisdiction.

## **9. REINITIATION-CLOSING STATEMENT**

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

## 10. LITERATURE CITED

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### **Northern Idaho Ground Squirrel**

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