United States Department of the Interior

FISH AND WILDLIFE SERVICE
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SUMMARY
BIOLOGICAL OPINION ON THE EFFECTS TO KUENZLER HEDGEHOG CACTUS FROM THE PROPOSAL TO ISSUE A 10-YEAR GRAZING PERMIT ON THE VERA CRUZ AND LATHAM ALLOTMENTS, SMOKEY BEAR RANGER DISTRICT, LINCOLN NATIONAL FOREST, NEW MEXICO

Cons. # 22420-2007-F-0089

Date of the biological opinion: August 26, 2008

Action agency: Lincoln National Forest

Project: This consultation concerns the effects of issuance of a 10-year grazing permit on the Vera Cruz and Latham Allotments on the Kuenzler hedgehog cactus (*Echinocereus fendleri* var. *kuenzleri*) (cactus). The allotment is located in the Smokey Bear Ranger District in the Lincoln National Forest (Forest) of Lincoln County, New Mexico.

Species affected: Kuenzler hedgehog cactus (*Echinocereus fendleri* var. *kuenzleri*).

Biological Opinion: The proposed action is not likely to jeopardize the Kuenzler's hedgehog cactus.

Incidental take statement: Not applicable to plants.

Conservation Recommendations: Implementation of conservation recommendations is discretionary. Seven conservation recommendations are provided.

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August 25, 2008

Cons. # 22420-2008-F-0089

Jacque Buchanan, Forest Supervisor
Lincoln National Forest
1101 New York Avenue
Alamogordo, New Mexico 88310-6992

Dear Ms. Buchanan:

This document transmits the U. S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed Vera Cruz and Latham Allotments and the issuance of new 10-year term grazing permits, U.S. Department of Agriculture, Lincoln National Forest (Forest Service), and the effects on the endangered Kuenzler hedgehog cactus (cactus) (*Echinocereus fendleri* var. *kuenzler*). You have determined that the proposed action "may affect, is likely to adversely affect" the cactus. We received your letter on April 23, 2008, requesting formal consultation in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The batched Biological Assessment (BA) for the Vera Cruz and Latham Allotments, Lincoln National Forest, Smokey Bear Ranger District, Lincoln County, New Mexico, dated April 17, 2008, evaluates anticipated effects on the cactus and its habitat resulting from the proposed action. The proposed action is to continue authorizing grazing by the issuance of a 10-year grazing permit for each allotment.

This Biological Opinion (BO) is based on information provided in the BA, *Framework for Streamlining Informal Consultation for Livestock Grazing, UDSA Forest Service, Southwestern Region* (Guidance Criteria) dated March 15, 2005, other information available to the Service, and telephone conversations with your staff. A complete administrative record of this consultation is on file in the Service's New Mexico Ecological Services Field Office.

Consultation History

Consultation began on April 21, 2008, when the Forest submitted their BA requesting formal consultation with the Service. Comments on the draft BO were received on August 19, 2008.

BIOLOGICAL OPINION

I. Description of the proposed action

Action Area

The action area for the proposed project includes all areas directly or indirectly affected by the Federal action. The action area for the proposed project is defined as the Vera Cruz and Latham Allotments.

Proposed Action

Vera Cruz Allotment

The Vera Cruz Allotment is located in the central part of the Ranger District, approximately 17 north of Ruidoso, New Mexico. The allotment is about 860 acres and is composed of pinyon/juniper woodlands with southwestern desert grasslands dispersed throughout the area. You are proposing to continue authorizing 206 animal unit months (AUMs) on the one pasture allotment, permitted on a year-long basis. You are also proposing to build fences around livestock-accessible cactus locations. Fencing will provide protection from incidental trampling.

Latham Allotment

The Latham Allotment is located in the southeastern part of the Capitan Mountains, just northwest of Arabella, New Mexico. The allotment is about 7,475 acres and is composed of pinyon/juniper woodlands with southwestern desert grasslands dispersed throughout the area. You are proposing to continue authorizing 2,303 AUMs, permitted on a year-long basis. Similar to the Vera Cruz Allotment, you are also proposing to build fences around livestock-accessible cactus locations. Fencing will provide protection from incidental trampling.

For both allotments, the key forage species are identified as blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), black grama (*Bouteloua eriopoda*), wolftail (*Lycurus pheoides*), and western wheatgrass (*Elymus smithii*). Existing structural range improvements would be maintained to serve their intended purpose.

You used GIS to model potential cactus habitat on each allotment by selecting elevations below 7,250 feet and east, southeast, south, southwest, and west aspects. This model was overlaid on a digital orthophoto to identify open hillsides, which are considered suitable cactus habitat. You estimate that 1,920 acres of suitable cactus habitat occurs on the Latham Allotment. Surveys were conducted on 1,920 acres of GIS-predicted suitable cactus habitat during May 2008, but no cacti were observed. Previous surveys conducted on the Vera Cruz Allotment located the cactus. In the event that cacti are found during future surveys, exclosures will be built around the occurrences to protect plants from incidental tramping.

II. Status of the species (range-wide)

Species description, life history, and population dynamics

Horst Kuenzler collected the type specimen of the cactus in 1961. In 1976, the cactus was identified as *E. kuenzleri* (USDI Fish and Wildlife Service 1985). Prior to 1976, the cactus was known as *E. psudohempelii*, and was included in the 1975 plant notice of review (40 FR 27824) as *E. hempelii*. When *E. kuenzleri* was listed as endangered in 1979, many experts of the taxon believed it was a subspecies or variant of *E. fendleri*, and not a separate species. With Dr. Lyman Benson's 1982 publication, The Cacti of the United States and Canada, the name *E. fendleri* var. *kuenzleri* became accepted and was changed in the July 1984 list of Endangered and Threatened Wildlife and Plants (Benson 1982, USDI Fish and Wildlife Service 1985).

The cactus is perennial and reproduction is sexual (Blue Earth Ecological Consultants, Inc. 2002). There is no evidence of reproduction by bulbils, tubers, stolons or rhizomes and the cactus does not appear to reproduce by vegetative fragmentation (Blue Earth Ecological Consultants, Inc. 2002). Pollination is primarily by bees, although butterflies and beetles may also pollinate flowers. Greenhouse studies at Mesa Gardens in Belen indicated the cactus is an obligate outcrosser and is incapable of self-fertilization.

The cactus may be single-stemmed or branched. The stems are solitary or in a cluster, more or less conical, about 6 inches (15 centimeters [cm]) tall and 4 inches (in) (10 cm) wide with 9 to 12 prominent ribs with tubercles from which spine clusters originate (USDI Fish and Wildlife Service 1985). The spines are angular, bulbous, and fused at the base. Central spines are usually absent, while radial spines vary from two to six and are variable in size up to 1 in (2.5 cm) long (USDI Fish and Wildlife Service 1985).

Budding occurs in April and flowering normally occurs during the latter half of May in to early June. Warm years can initiate earlier flowering and cool springs may delay flowering until early June (Blue Earth Ecological Consultants, Inc. 2002). Flowers are large for the size of the plant, up to 4 in (10 cm) long (USDI Fish and Wildlife Service 1985). Fruits form in August. Fruits are bright red when mature, ovoid to cylindrical, may be over 2 in (5 cm) long, and are spiny with miniature versions of the stem spines. Each plant may have three to six fruits, each fruit having an average of 1,050 seeds (Blue Earth Ecological Consultants, Inc. 2002). Seeds are black and pitted. Seed dispersal by rodents, wind and water occurs in September and October (Blue Earth Ecological Consultants, Inc. 2002). Seed viability is over 90 percent and seeds may survive in the soil for up to five years (Blue Earth Ecological Consultants, Inc. 2002). Characteristics used to separate the cactus from the other cacti in its range are the contorted, white, chalky-textured spines and large, magenta flowers (USDI Fish and Wildlife Service 1985). The cactus has a greater number of longer and more slender spines, typically less tubercled stems, and narrower fruits. A similar species, *E. triglochidiatus* is usually clustered and larger, no dark line on spines, fewer ribs (5-7), and red flowers. *E. occineus* var. *gurneyi* also has red flowers. Its stems are densely clustered; spines are mostly terete (New Mexico Rare Plants 2005).

Typical cactus habitat is the lower fringes of the piñon-juniper woodland from about 5,200 feet (ft) to 6,600 ft (1,600 meters [m] to 2,200 m) elevation (Blue Earth Ecological Consultants, Inc. 2002). Occupied habitat consists of gentle slopes (15 to 60 percent) or benches with gravelly to rocky soils and southern, eastern, and western exposures (New Mexico Department of Game and Fish, Performance Report 1991; Blue Earth Ecological Consultants, Inc. 2002). Soils may be derived from limestone or intrusive rocks of the Sacramento or Capitan uplifts. The cactus also occurs on unconsolidated, gravel hills in the Fort Stanton area (Blue Earth Ecological Consultants, Inc. 2002). The cactus occurs in areas with about 180 frost-free days and average precipitation of about 16 in (41 cm).

Other common plants associated with the cactus include yerba (*Baccharis pternoides*), blue grama grass (*Bouteloua gracilis*), plains lovegrass (*Eragrostis intermedia*), buckwheat (*Eriogonum havardii*), Goldman's silktassel (*Garrya ovata ssp. goldmanii*), false pennyroyal (*Hedeoma pulchella*), bladderpod (*Lesquerella valida*), pincushion cactus (*Mammillaria heyderi*), and sage (*Salvia earlei*) (USDI Fish and Wildlife Service 1985).

Status and distribution

The cactus was proposed for listing as endangered on June 16, 1976, (41 FR 24523) and was federally listed as endangered on October 26, 1979, with no critical habitat designated due to the threat of collection (44 FR 61924). The cactus is protected from removal or reduction to possession from any area under Federal jurisdiction (50 CFR 17.61 and 17.71). The cactus is also listed as endangered by the State of New Mexico (NMSA 1978 75-6-1). State law prohibits collection of the cactus without a permit from the Rare Plants Program of the New Mexico Energy, Minerals, and Natural Resources Department. A recovery plan for the cactus is in place (USDI Fish and Wildlife Service 1985).

The type locality for the 1976 description of the cactus was near Elk, Otero County, New Mexico (USDI Fish and Wildlife Service 1985). The recovery plan for the cactus identified two populations in the Rio Hondo and Rio Peñasco drainages in Chaves, Lincoln, and Otero Counties, New Mexico (USDI Fish and Wildlife Service 1985). The range of the cactus was described as extremely limited in 1984, with known populations limited to near Elk and Mayhill, in east-central Otero County and the plains east of Elk in west-central Eddy County (New Mexico Native Plant Protection Advisory Committee 1984). The species account for the cactus developed in 1988 shows cluster populations in the Fort Stanton area along the south side of the Capitan Mountains and in the northern end of the Guadalupe Mountains in southeastern Otero County, in addition to the two previously described populations (USDI Fish and Wildlife Service 1985; Blue Earth Ecological Consultants, Inc. 2002).

The cactus is now known to be more abundant and widespread than when it was listed as endangered in 1979. DeBruin (1993) and Chauvin et al. (1998) documented 1,611 sightings of cacti on Federal lands on the east-slope of the Sacramento Mountains. Additional populations in highway rights-of-way have been found on the west slopes of the Sacramento Mountains near Carrizozo for an additional 98 cacti (Knight 1999, Bleakly 2001). Sivinski (1996) observed 68

cacti on the Lincoln National Forest in the Guadalupe Mountains and an additional 100 in 1999 (Sivinski 1999). The Guadalupe Mountains surveys of Bureau of Land Management (BLM) jurisdictions found 191 cacti (Ladyman et al. 1998, Chauvin et al. 2001). Subsequent surveys in 1998, 2001, and 2002 by Forest Service contractors found 594 previously undocumented cacti on BLM lands in the Fort Stanton area in 2003, another 231 cacti in 2004, and an additional 18 on BLM land in the Guadalupe Mountains (USDI-Bureau of Land Management 2003, 2004). Combined together, there have been up to 245 individuals on the Smokey Bear Ranger District (USDA Forest Service 2007a), 514 plants observed and reported on the Guadalupe Ranger District (Fragua 2005), and 30 on the Sacramento Ranger District (USDA Forest Service 2007a) for a total of 789 individuals on the Lincoln National Forest. On the Smokey Bear Ranger District, data from 1998 and 2001 recorded 227 to 245 cacti (USDA Forest Service 2007a). One hundred and seventy-three of these cacti, located on the east end of the Vera Cruz Allotment, are under re-examination for correct identification (USDA Forest Service 2007a). In total, botanists have found 3,276 cacti during inventories of Federal lands.

Much of the Federal jurisdictions within the range of the cactus have been surveyed, usually within the most suitable habitats. Large areas of State, private and tribal lands contain suitable habitats that have not been surveyed for the presence of this cactus (USDI Fish and Wildlife Service 2005).

The total number of cacti is impossible to obtain because they are difficult to detect when not flowering, many habitats are inaccessible, and populations may fluctuate up and down over time (USDI Fish and Wildlife Service 2005). However, it is reasonable to estimate several thousand cacti within the known range of this cactus (USDI Fish and Wildlife Service 2005). In 2005, the Service estimated that researchers have observed approximately 3,300 individual cacti. Most field botanists feel this number should be doubled to 6,600 individual cacti. Since only about half the suitable habitat has been searched, that number could reasonably be doubled again to an estimated 13,200 individuals (USDI Fish and Wildlife Service 2005). Population trends have not been adequately assessed because all attempts at monitoring programs by State and Federal agencies have lasted only three to five consecutive years and monitored few individual plants (USDI Fish and Wildlife Service 2005).

III. Environmental baseline

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone section 7 consultation, and the impacts of State and private actions that are contemporaneous with the consultation in progress. The environmental baseline defines the status of the species and its habitat in the action area to provide a platform from which to assess the effects of the action now under consultation.

Status of species within the action area

Echinocereus fendleri var. *kuenzleri* is known to inhabit the Vera Cruz Allotment, whereas on the Latham Allotment, there is 1,920 acres of potential unsurveyed cactus habitat. The cactus generally occupies gravelly flats and rocky hillsides with microsites of stable surfaces and slopes of under 5 percent (USDA Forest Service 2007a). Cacti prefer limestone or igneous/meta-volcanic substrates, and often are surrounded by good grass cover (USDA Forest Service 2007a).

Factors affecting species environment within the action area

The Vera Cruz Allotment is situated between 6,500 and 7,370 feet in elevation, whereas on the Latham Allotment elevations range between 6,000 to 6,800 feet. The vegetation is primarily composed of pinyon-juniper, grading into predominantly grasslands.

At the present time, there are no significant mining or oil and gas production activities within the habitat of the cactus. Most of the known occupied habitats occur in relatively remote areas, which are unlikely to be converted to land uses other than open range for livestock grazing (USDI Fish and Wildlife Service 2005). Occupied and potential habitats of Kuenzler cactus can be accessed by off-road vehicles, although habitat locations are remote and some use is restricted by locked gates (L. Cordova, pers. comm., 2007).

Threats to the cactus include off-road vehicle traffic, road improvements, construction activities, cattle grazing and other livestock management activities, herbicide spraying, illegal collecting, severe weather (primarily drought and freezing), and potentially fire. Activities involving ground disturbance and/or removal of grass (i.e., off-road vehicle use, road maintenance or other types of construction, livestock grazing and management) may increase erosion potential, contribute to seedling mortality, and contribute to winter freezing or summer sun-burning of cacti.

Off-road vehicles, particularly those being driven off of approved dirt roads or illegally, can directly damage or crush cacti or indirectly lead to destruction of habitat from crushing or removing grasses and from local soil erosion. Road densities are estimated at 1.2 miles per section, which are greater than recommended road miles per section for wildlife such as elk, but use of roads is limited due to private land and primitive roads (USDA Forest Service 2007b). Highway construction and maintenance activities may threaten populations. However, some of the densest populations are found within the protective confines of highway rights-of-way, where livestock grazing is excluded (Blue Earth Ecological Consultants, Inc. 2002).

There is only anecdotal evidence that livestock grazing may cause increased mortality of the cactus. A two-year study (1984-1985) by The Nature Conservancy found that during a year of cattle grazing with 65 percent forage utilization, cactus mortality outside a fenced exclosure was 12 percent while there was zero mortality inside the exclosure where no grazing had occurred (Bates 1985). One cause of mortality to individuals is trampling by livestock. Livestock grazing also removes grass cover, which can reduce the suitability of sites for seed germination and

seedling establishment and can expose adult plants (USDI Fish and Wildlife Service 1985, 2005). Concentrating livestock by placing salting or watering points can increase the likelihood of cactus being trampled. No evidence of serious habitat modification from grazing was observed under prescribed grazing management in the Rawhide fire area (Sivinski 1996).

The encroachment of juniper and piñon trees into rangelands is an ongoing issue in many areas in the Southwest. Invading juniper and piñon trees, as well as noxious weeds, are viewed as a continuing problem within some allotments and may need to be addressed in the future with herbicides and approved integrated pest management techniques (USDA Forest Service 2007a, 2007b). The application of herbicides may affect the cactus. At this time, there are no plans to use herbicides on these allotments.

In 1985, the Service reported that collectors had reduced its numbers to the point of near extinction in the wild (USDI Fish and Wildlife Service 1985). Illegal collection of the cactus from its natural habitats has not had a significant observable impact on the known populations during recent years (USDI Fish and Wildlife Service 2005). Some illegal take has occurred and will likely continue, especially at the type locality and other well-known and easily accessible locations (USDI Fish and Wildlife Service 2005). However, most populations are relatively remote, dispersed, and less likely to be impacted by casual collectors (USDI Fish and Wildlife Service 2005). This plant is readily available from commercial growers, who probably satisfy much of the demand from cactus hobbyists (USDI Fish and Wildlife Service 2005).

Drought may act alone or compound exposure effects by exacerbating environmental conditions not conducive to seedling establishment and overall cactus health (USDA Forest Service 1998). It is also believed that drought conditions and moisture stress could lead to individual plants being lost to rodents or omnivores that may forage on the plants, as well as insects and microbial pathogens (USDA Forest Service 1998).

Cactus habitat is predominantly arid grassland and piñon-juniper savanna. These cacti usually occur in grass-covered areas and are susceptible to fire. Prescribed fire has become a frequently used land management tool on Federal lands throughout the range of the cactus and is effective at reducing woody vegetation on livestock rangelands (USDI Fish and Wildlife Service 2005). Sivinski (1999) studied the effects of a 1993 natural wildfire that burned within a cactus population in the Guadalupe Mountains on the Lincoln National Forest. Seven years after the fire, this population was found to have only one-third the numbers of cacti within the burned area as compared to a similar area of adjacent unburned habitat (USDI Fish and Wildlife Service 2005). Fire mortality was apparently severe and regeneration of the burned population segment was slow. Therefore, frequent prescribed fires could have significant impacts on the cactus (USDI Fish and Wildlife Service 2005).

IV. Effects of the action

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with

that action that will be added to the environmental baseline. Indirect effects are those that are caused by the proposed action and manifest later in time, but are still reasonably certain to occur.

Any adverse impacts on this cactus by livestock are indirect with the exception of occasional damage due to trampling (USDI Fish and Wildlife Service 1985). The Forest Service determined that trampling of cacti by cattle may occur within occupied sites on the Vera Cruz and Latham Allotments. Additionally, range riders gathering cattle have the potential to inadvertently trample cactus within unsurveyed or unfenced habitat. Trampling could lower the reproductive output or result in mortality of cacti. As noted, there are plans to construct enclosures around cacti that are accessible to livestock on the allotments.

The new term permits will not increase the stocking levels compared to the present level. Still, it is possible that livestock may trample cacti within the areas proposed for exclosures, prior to their construction. Nevertheless, livestock trampling will be avoided after the exclosures are finished. Actions such as stocking adjustment, livestock removal, or other management measures may be prescribed in the event that adverse impacts to the cactus or declining conditions (soil, drought, cover, etc.) at the cactus sites are detected through Forest Service monitoring.

Implementation of the proposed action will likely result in indirect impacts to the cactus within the Vera Cruz and Latham Allotments from trampling and crushing grass cover adjacent to the cactus. Temperature appears to be a crucial element in the survival of cacti populations (New Mexico Department of Game and Fish, Performance Report 1991). Cacti have experienced high levels of winterkill, indicating that this species is sensitive to extreme cold. It has not yet been determined if the sensitivity is to winter temperature or if it is most sensitive to late spring frost (New Mexico Department of Game and Fish, Performance Report 1991). Grass cover is also crucial to the survival of this species (New Mexico Department of Game and Fish, Performance Report 1991). Reduced grass cover can expose adult plants to extreme temperatures as well as increased erosion that contribute to mortality (USDI Fish and Wildlife Service 1985). A dense grass cover shields the plant from frost damage. The removal of grass cover around plants also has the potential to reduce the suitability of sites for seed germination and seedling establishment by exposing germination microsites to more extreme temperature ranges and hardened, compacted, or eroded soil. Removal and trampling of vegetation around individual cacti are expected to be short-term in duration. Although vegetation is expected to recover, this reduction in grass cover is considered an adverse effect.

The Service expects that management practices, such as preventing livestock salting and water developments from overlapping with any occupied cactus sites, herding, monitoring utilization in sites known to have cacti, and movement of livestock from pastures if allowable use levels are reached, will be undertaken to prevent overuse of the forage resource and soil erosion, and to maintain healthy levels of vegetative cover for Kuenzler cacti. We anticipate that the proposed light to moderate grazing intensity and the adjustment in livestock distribution in response to seasonal climate conditions, will improve the overall range conditions on the allotments. When

forage plants are maintained and responsive livestock management practices are implemented promptly, adverse effects to the cactus will be greatly reduced.

Interrelated actions are actions that are part of a larger action, and are dependent on the larger action for their justification. The use of access roads and vehicles in the project areas are considered interrelated with the implementation of the current project. The majority of vehicles will likely stay on roads and trails. Therefore, the effects from interrelated actions have a low potential to result in cacti being harmed by trampling or crushing individual plants.

V. Cumulative effects

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this BO. 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 cactus may be adversely affected on State, private, and local lands by livestock grazing, road maintenance, dispersed recreation (particularly off-road vehicle use), wildlife habitat improvements, severe climate conditions, wildfire related actions and private land uses.

VI. Conclusion

After reviewing the current status of the cactus, the environmental baseline for the action area, the effects of the proposed livestock grazing, and the cumulative effects, it is the Service's biological opinion that the livestock grazing, as proposed, is not likely to jeopardize the continued existence of the cactus. No critical habitat has been designated for this species, therefore, none will be affected.

We reached this conclusion for the following reasons: 1) the relatively low level of anticipated trampling; 2) suitability and sustainability of cactus habitat will not be significantly altered by livestock grazing; 3) herbivory by livestock is not expected; 4) salting and water developments will not occur within or overlap any occupied cactus sites; 5) monitoring will occur within key areas and in occupied habitat to ensure forage use limits of 40 percent are not exceeded in order to protect the cactus; and 6) any impacts to grass cover will be short-term.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit take of endangered and threatened species without special exemption. Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of federally listed endangered plants. The Act also protects plants from malicious damage on areas under Federal jurisdiction, or the destruction of endangered plants on non-Federal areas in

violation of State law or regulation or in the course of any violation of a State criminal trespass law (19 NMAC 21.2).

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use 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 plans, or to develop information. The recommendations provided here relate only to the proposed action and do not represent complete fulfillment of the agency's section 7(a)(1) responsibility for this species. We recommend the following conservation recommendations be implemented for the allotments.

1 The Forest Service should continue surveying all potential cactus habitat when the plant is easily identified and send survey reports to the Service. Survey data will provide population trend information and contribute to the overall knowledge of this species.

2 The Forest Service should exclude grazing from occupied cactus habitat that has a high potential for trampling (e.g. close to existing waters, gathering areas, and/or cattle travel ways), or where forage use monitoring indicates a declining trend in habitat over several (3-5) years.

3 The Forest Service should accompany the permittees the first time any inspection or maintenance of the exclosure fencing or gates is performed, so that they can demonstrate the best approach to avoiding the cactus in the vicinity of exclosures.

4 The Forest Service should advise the permittees to keep all vehicles outside of enclosed areas to prevent the formation of tracks and reduce the chances of damaging cacti.

5 Any suspicious collection-related activity should be reported to the Service immediately.

6 The Forest Service should educate law enforcement officers who routinely patrol this area in identifying suspicious collection activity.

7 In order to protect cacti from collectors, the Forest Service should keep monitoring of populations inconspicuous.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the issuance of a 10-year term grazing permit on the Vera Cruz and Latham Allotment and their effects on the cactus.

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 retained (or is authorized by law) and if: (1) new information reveals effects of agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this BO; (2) agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat not considered in this BO; or (3) a new species is listed or critical habitat designated that may be affected by the action.

In future communication regarding this project, please refer to consultation #22420-2008-F-0089. Please contact Eric Hein at the same address or (505) 761-4735 if you have any questions.

Sincerely,

Wally Murphy
Field Supervisor

cc:
District Ranger, U.S. Department of Agriculture Forest Service, Lincoln National Forest, Smokey Bear Ranger District, Ruidoso, New Mexico
Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals, and Natural Resources Department, Forestry and Resources Conservation Division, Santa Fe, New Mexico

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