



United States Department of the Interior

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Cons. #2-22-01-F-180

Memorandum

To: Field Office Manager, Las Cruces Field Office, Bureau of Land Management, Las Cruces, New Mexico

From: Field Supervisor, New Mexico Ecological Services Field Office, U.S. Fish and Wildlife Service, Albuquerque, New Mexico

Subject: Formal Section 7 Consultation for a Right of Way Permit Allowing Access to the Proposed Hook Ranch Gravel Quarry

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion (BO) based on our review of the proposed Hook Ranch Gravel Quarry/ Right-of-Way Permit (ROW) and its effects on the endangered Sneed's pincushion cactus (*Escobaria sneedii* var. *sneedii*)(cactus) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Formal consultation was initiated on December 10, 2001.

This BO is based on information provided in the December 20, 2001, biological evaluation (BE), one addendum submitted to our office on February 5, 2001 meetings and conference calls with staff and management from the Las Cruces Field Office of the Bureau of Land Management (BLM), and other sources of information available to the Service. A complete administrative record of this consultation is on file at the New Mexico Ecological Services Field Office, Albuquerque, New Mexico.

Description of the Proposed Action

The BLM proposes to issue a ROW permit to Western Mobile Corporation, Inc. which is a subsidiary of Lafarge Corporation. This permit will provide access to a private land in-holding (Hook Ranch) where the applicant has recently submitted a proposal to the New Mexico State Lands Office to create a gravel quarry (Western Mobile 2001). The existing road access to the Hook Ranch is located 5.5 miles east of the junction of NM 404 and Interstate 25. The road

travels south from NM 404 through a BLM Area of Environmental Concern (ACEC) (Figure 1). The elevation of the road where it leaves NM 404 is approximately 4320 feet. It ascends a small alluvial slope to the proposed lease which is in the upper portion of an unnamed drainage. This dirt road will require widening, straightening, and realignment in some areas to provide adequate access to the proposed quarry site.

The ROW permit will allow access to the proposed quarry area which is an area of exposed dolomite and which provides habitat for the federally listed endangered Sneed's pincushion cactus. The action area includes the 1.25 miles of road which will be altered and improved, the quarry site itself, and part of the surrounding area that is currently occupied by the cactus and which may be affected by quarry activities.

The proposed quarry site is located entirely on private land. However, the salable minerals are owned by the State of New Mexico. The applicant has acquired a permit from the New Mexico State Land Office (SLO) to build the quarry and extract the aggregate materials. The proposed quarry is designed for a 5 year life with a projected annual production of 250,000 tons of sized construction aggregates. Aggregate production will be accomplished utilizing drilling, blasting, loaders and haul trucks. The rock will be crushed and screened in an on site facility and then transported from the lease area. A portable asphalt-mix plant and concrete batch plant may also be located in the lease area.

As part of the proposed action, the BLM will make adherence to the quarry plan as currently proposed and permitted by the SLO, a stipulation to the issuance of the ROW permit. The ROW permit expiration will coincide with the expiration of the SLO permit required by the applicant to mine state owned minerals (September 6, 2006). The applicant has agreed to construct a gate at the entrance to the quarry which will limit access to quarry personnel in the lease area where the cactus is located. This will reduce the opportunity for unauthorized persons to enter the lease area via improved road access to illegally collect the cactus.

A botanist will walk the perimeter of the lease after it has been flagged, but before construction, to ensure that any cacti not detected in initial surveys that were conducted in 2001 are marked and can be avoided, if possible. Attempts will be made to remove and relocate individuals which are certain to be impacted by the proposed quarry. Plants that can be successfully removed will be air dried for two weeks to allow the cut or broken roots to harden before transplanting. Removed plants will be transplanted to a permanent plot in suitable habitat on BLM lands and monitored. Avoidance of the 18 individuals near the lease perimeter has been recommended because transplantation success is unproven.

Status of the Species/Critical Habitat

Species Description, Life History, and Populations Dynamics

Sneed's pincushion cactus was first collected in El Paso County, Texas in 1921 and was described by Britton and Rose in 1923 (Britton and Rose 1963). The cactus was listed as endangered by the Service in 1979 (USFWS 1979). Declines in the species were attributed to habitat modification, collection, lack of regulatory protection by the State of Texas, and its restriction to one type of rock formation (USFWS 1986).

A single cactus is typically made up of a clump of small clustered whitish stems, up to 100 per clump. Stems are 2.5 to 7.5 centimeters (cm) long and 1-3 cm in diameter and are densely covered with short white spines that fade to gray as they age. Central spines are 4.5 to 6 millimeters (mm) long. They are sometimes tipped with pink or brown and number 6-9 per areole. Radial spines are white and number 25-35 per areole and range from 3-6 mm in length. Tubercles on Sneed's are small, up to about 3 mm long, and are grooved on the upper surface. The cactus usually flowers in late April and flowers are white to pinkish, do not open widely, and are 12-19 mm in diameter. Fruits are 1-1.5 cm, are elongate, and are tinged with green, brown, or dull red. Seeds are 0.8 mm in length, kidney shaped, and strongly reticulate.

Habitat where this cactus can be found is characterized by exposed dolomite or limestone rock in Chihuahuan Desert Scrub vegetation (Dick-Peddie et al. 1993). Plants are commonly found growing in cracks on vertical cliffs or ledges in the rock face. All New Mexico populations of this plant are restricted to Paleozoic Fusselman Dolomite formations of the Silurian Age. Occupied habitat ranges in elevation from 1,200 to 2,350 meters (m) and average precipitation for these areas varies from 19.7 to 40 cm per year (USFWS 1986).

Common plant communities associated with the cactus include creosote (*Larrea tridentata*), Torrey yucca (*Yucca torreyi*), gramma grasses (*Bouteloua* spp.), sotol (*Dasylirion wheeleri*), ocotillo (*Fouquieria splendens*), and lechugilla (*Agave lechugilla*). Several other cactus species may also be found within the range of Sneed's pincushion cactus. These include prickly pear (*Opuntia* spp.), brown flowered hedgehog, turk's head, and cob cactus.

Status and Distribution

There is no critical habitat designated for Sneed's pincushion cactus. The BLM's habitat management plan for the cactus states that mining is the most significant threat to the cactus on BLM managed lands (BLM 1987). The expansion of urban areas resulting from growth of El Paso

and surrounding suburbs has become an increasing threat to the cactus as well. Population areas are isolated from one another and their vulnerabilities to natural factors such as drought can vary relative to location, aspect, and precipitation. Grazing may have some effect on the cactus but because of the terrain where it is found, this factor is not thought to be significant. Recreation and illegal collection are factors that adversely affect the cactus as well. Training activities on Fort Bliss military range may have some effect on the cactus but known populations there are actively managed and avoided.

There are currently three known areas where the cactus has been documented in the United States. All three areas are located in the Franklin Mountains which run north-south and are located in south-central New Mexico (Dona Ana County) and west Texas (El Paso County). Within the Franklin Mountains there are three known population areas; Webb Gap, Bishop's Cap, and Anthony Gap (BLM 2001). In 1994, a population was documented in the Sierra Juarez just across the Rio Grande from El Paso in Mexico. Projections of population numbers based on occurrence of the required dolomite substrate where the cactus is found in the U.S. were between 3,000 and 25,000 individuals (Zimmerman 1985). However, the cactus is not always found in what appears to be suitable habitat, and its populations seem to be relatively isolated (Champie 1974). Intensive surveys conducted at the Anthony Gap population area in 1989-1990 detected 713 plants. Surveys for the cactus range-wide during the same time period detected 1277 plants total, with the majority being in the Anthony Gap population (USFWS 1990). The known range is documented to be approximately 37 miles long with the southerly most known population being in Mexico in the Sierra Juarez, and the northern most population being in the Dona Ana mountains of New Mexico. Within these mountain ranges, potential habitat is located where suitable dolomite substrate exists, however, many areas that appear to be suitable habitat for the cactus are unoccupied.

Permanent monitoring plots located on BLM lands have documented declines of up to 50 percent as a result of a large die off in 1994. Mortality to the cactus was attributed to a fungal disease and other diseases resulting from wet conditions in 1993 and a subsequent drought in 1994 (BLM, 2001). Data collected from monitoring plots in April of 2001 seem to indicate a stable trend in the population.

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 current 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 the species within the Action Area

The cactus within the action area are part of the Anthony Gap population area. Surveys conducted in February of 2001 on the Hook Ranch documented 273 cacti primarily on the ridge to the east of the proposed quarry area (BLM 2001). Because the surveys were conducted before the flowering season, it is likely that some plants were missed and that 273 is a conservative estimate of the total number of plants existing on the ranch. Of the 273 plants detected, 2 are located within the proposed quarry area and an additional 18 individuals occur at the boundary of the proposed lease area and may be adversely affected by construction of a chain link perimeter fence (Figure 2). No cacti were found along the access road which would be permitted under the proposed ROW. Using survey data from 1990 for the entire Anthony Gap population area, approximately 38 percent of the cacti in this area are located on the Hook Ranch. Cacti on this private in-holding make up about 21 percent of documented Sneed's pincushion occurrence in the United States.

Factors Affecting the Species in the Action Area

The most significant known factors that may currently be affecting the cactus in the action area are recreation and collecting. The private in-holding is currently fenced although maintenance of the fence is a chronic problem because of vandalism and gates being left open. Access to sites where the cactus exists is not monitored. The nearby Franklin Mountains State Park draws recreational hikers that may accidentally trample individuals. In addition, the lower part of the site is commonly used as an informal firing range. Trampling, shooting, and illegal collecting may be factors affecting the plant in this area. The area is currently grazed and is divided into two pastures. The fence between the two pastures is in need of maintenance, and gates left open by the public often result in cattle movement from one pasture to another. However, because the cactus is found in steep, rocky cliff terrain, grazing is not thought to be a significant impact. Although disease has not been documented in recent years, it may be a factor affecting some individuals.

Effects of the Action

Permitting a ROW to the applicant would result in improvements to and realignment of the existing road access. Surveys did not detect any cactus in this 1.25 mile section of road. Actions associated with improving access to the quarry site should not result in any direct impacts to the cactus. However, adjacent areas are used frequently by the public for recreational shooting and hiking. Improved access to the area may result in increased public use, resulting in a subsequent increase in unintentional trampling or destruction of the cactus as well as illegal collecting of individuals.

Mining the private in-holding for construction aggregate will result in direct, high intensity, short term impacts to the plant. The proposed quarry is located within existing habitat and adjacent to a densely populated area of the cactus. At least two individuals will be directly, negatively impacted by the proposed action. These plants will be disturbed and efforts to transplant them will likely be unsuccessful. The potential exists to harm 18 other individuals located along the perimeter of the quarry area. These individuals will be removed and relocated if possible. However, the substrate where they are found (rock crevices) may prevent removal and successful relocation of individuals to a new area. Habitat loss will also adversely affect the cactus. Because this species is limited to a particular type of dolomite substrate, loss of this substrate will likely prevent any recolonization into the quarry area, where it historically occurred, after the proposed mining action is complete. Removal of individuals from the population will also result in a loss of genetic diversity for the population area. This may have long term effects on the viability of the population.

Indirect effects of the proposed quarry include increases in large particulate pollution (dust) which may have some detrimental effects on the cactus over the five year period for which the mining is proposed. Indirect effects to the cactus include dust generated by quarry activities which may have some effect on the nearby individuals. The effects of dust on the survival of the cactus are not known but are likely not severe enough to result in the eventual or immediate extirpation of the population. Quarry personnel may inadvertently trample or destroy individual plants during mining operations or maintenance activities (i.e. fence repair). The presence of quarry personnel may result in some beneficial effect if it functions as a deterrent to potential illegal collectors both within the quarry area and west of the quarry.

Cumulative effects are those effects that are reasonable certain to occur as a result of future non-federal activities in the action area. Recreational shooting, illegal collecting, and recreation are adverse effects that are reasonably certain to occur and potentially increase as a result of the proposed action. Improved access to the area via the improved ROW may result in increased use of the area by the public including hiking, shooting, off road vehicle use, and mountain biking. All of these activities have the potential to result in adverse impacts to the cactus. Illegal collecting may also increase as a result of the improved access.

Using 1990 survey data for the Anthony Gap population area, approximately 38 percent of the cacti in this area are located on the Hook Ranch. Cacti on this private in-holding make up about 21 percent of documented Sneed's pincushion occurrence in New Mexico. As proposed, the ROW and quarry will result in a minimum take of 2 individuals up to a maximum of 20. At most, 2 percent of the population may be affected by the proposed action. Indirect effects resulting from increased access to the area, large particulate pollution, and incidental harm to individuals by quarry personnel or the public could impact up to 21 percent, or 273 individuals, of the estimated population for the Anthony Gap area. Indirect effects to the cactus include dust generated by quarry activities which may have some effect on the nearby individuals. The effects of dust on the

survival of the cactus are not known but are likely not severe enough to result in the eventual or immediate extirpation of the population. Loss of all 273 individuals is not expected, but should it occur due to indirect effects, 440 individuals in the Anthony Gap population would remain and this population area would not be extirpated.

Conclusion

After reviewing the current status of the cactus, the environmental baseline for the action area, the effects of the proposed ROW permit and interdependent gravel quarry, and the cumulative effects, it is the Service's biological opinion that the action 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.

Incidental Take Statement

Section 9 of the Act, as amended, prohibits taking (harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species of fish and wildlife without a special exemption. Harass is further defined as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent to significantly disrupt normal behavior patterns. Normal behavior patterns include, but are not limited to, breeding, feeding, and sheltering. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. 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 a prohibited taking provided that such taking is in compliance with the incidental take statement.

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 endangered plants or the malicious damage of such plants 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.

Conservation Recommendations

1. Any suspicious activity by persons who may be collecting the cactus should be documented and reported to the Service. BLM should ensure that quarry personnel and managers are educated in

identifying suspicious activity involving the removal of the cactus and have contact information easily accessible should suspicious activities take place.

2. BLM should be provided access to the Hook Ranch to monitor the cactus at three year intervals. Monitoring data would provide population trend information and contribute to the overall knowledge of this species' range-wide trend.

3. Individuals located on the perimeter of the lease boundary should be flagged and avoided during mining operations and associated activities.

Reinitiation

This concludes formal consultation on the actions outlined in the request for consultation on the effects of permitting a right of way access to habitat occupied by the cactus. As provided in 50 CFR 402.16, reinitiation of formal consultation is necessary where discretionary Federal agency involvement or control over the action has been retained (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 not considered in this opinion; or (4) a new species is listed or critical habitat is designated that may be affected by the action.

In future communications regarding this consultation, please refer to consultation #2-22-01-F-180. If you have any questions, please contact Carrie Hernandez at the letterhead address or at (505) 346-2525, ext. 143.


Joy E. Nicholopoulos

cc: (w/o enc)

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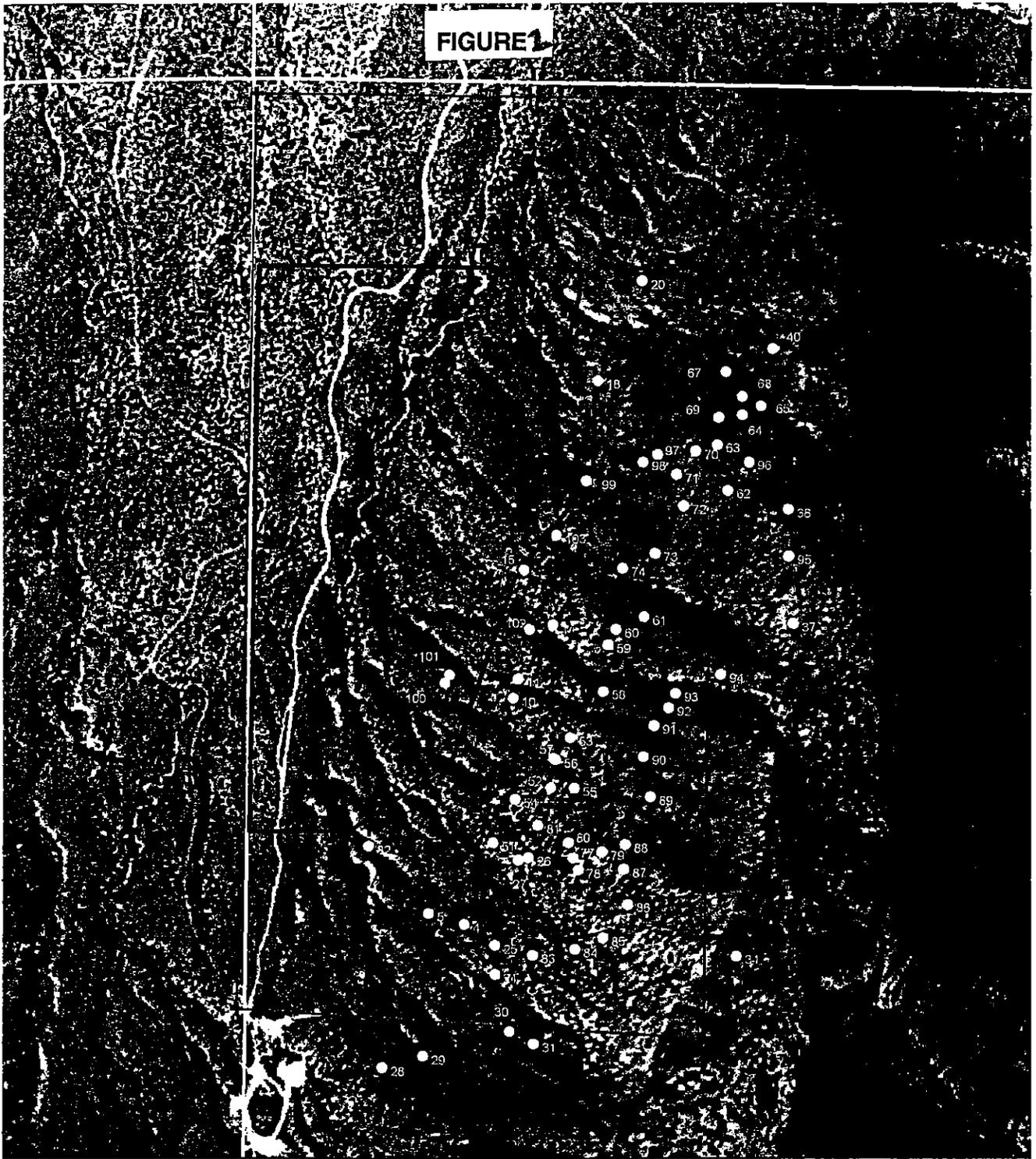
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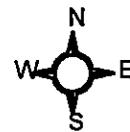
FIGURE 1



+ Lease Corner
Cactus Location

Proposed Quarry Area
Lease
Section Lines

500 0 500 Feet



hook Ranch, Map by Bleakly Botanical & Biological June 2001

Locations of Sneed's cactus in the quarry area