

United States Department of the Interior

U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951

Telephone: (602) 242-0210 FAX: (602) 242-2513

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Refer to: N1621

January 25, 2001

Memorandum

To: Superintendent, National Park Service, Saguaro National Park

From: Field Supervisor

Subject: Saguaro National Park Five-Year Trailwork Plan

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the National Park Service's (NPS) proposed Five-Year Trailwork Plan for Saguaro National Park (SNP) located in Pima County, Arizona, and its effects on the endangered cactus ferruginous pygmy-owl (*Glacidium brasilianum cactorum*) (CFPO) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Your October 23, 2000, biological assessment and letter requesting formal consultation was received on October 25, 2000.

This biological opinion is based on information provided in the October 23, 2000, biological assessment; telephone conversations among wildlife biologists Natasha Kline (NPS), Mike Wrigley, and Thetis Gamberg (Service); field investigations; and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, trail construction, reconstruction or brushing and maintenance and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at our Phoenix office.

Consultation History

Informal consultation began during a brief discussion between Natasha Kline and Mike Wrigley at the CFPO survey protocol training session held at the Arizona Sonora Desert Museum on January 26, 2000. On June 14, 2000, Mike Wrigley and Thetis Gamberg visited a site representative of the trails system of the park (Wildhorse Trailhead). Telephone conversations and electronic messages between the SNP and the Service continued to refine and modify the project after the SNP biological assessment (BA) requesting formal consultation was received by

the Service (October 23, 2000). Final project clarification was received by electronic message from SNP to the Service, January 11, 2001.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The biological assessment (BA) contains informative tables and figures used for analysis of this proposed project. Table 1 (BA) lists the SNP trail rehabilitation and new trail construction projects proposed for the next five years (2001 to 2005), with project locations shown in Figures 1 and 2 of the BA.

Trail rehabilitation includes installation of stone erosion-controlling structures (“stairs” and waterbars) on existing trail locations to slow soil erosion. Soil erosion (accelerated on trails due to the soil compaction and the removal of vegetation) is the primary threat to resources from trails. Well-constructed trails significantly reduce erosion and “social”, redundant routes, narrow the main trail to two-foot width, and bring trail grades back to the level of the surrounding terrain. This protects surrounding resources as well as the trail itself.

Construction of these stone trail structures requires a masonry crew (with five to 10 workers), power tools, and commercial building stone. Most trails traverse areas where native stone does not exist or where it is not suitable for building trail. As much as 60 cubic yards of stone per project is hand-selected from commercial sources and transported to the various project sites using motorized wheelbarrows on existing trails or through sandy washes. This process may take up to two weeks, and trail work may last an additional four to eight weeks, depending on the project. Stones are shaped with gasoline-powered masonry saws and jackhammers, and a variety of hand tools are used for other aspects of construction. The use of motorized equipment can be very noisy in the localized area during trail work.

New trail construction includes the above, with some removal of shrubs and bushes. Trees, and saguaros taller than two feet, will not be removed in new trail construction; trails will be carefully routed to avoid them. It is anticipated moving a saguaro (two foot or shorter) might be conceivable, but is very unlikely to occur with the planned trail placement on the ground.

Trail maintenance or “brushing” is the trimming of over-hanging twigs and branches of bushes and shrubs which impinge in the trail space. Brushing does not occur outside the trail footprint.

Planned Surveys for CFPO

Due to weather conditions, personnel availability, and hiring constraints, SNP hires and works trail crews during the spring and summer months. The annual CFPO spring survey period during the CFPO breeding season (January 1 through July 15) coincides with this proposed five-year trail work project. To minimize effects to CFPO, SNP proposes to selectively survey the highest-quality CFPO habitat and potential habitat that covers the projects considered in this proposal for the first two years (2001 and 2002). Surveys will be conducted per acceptable protocol and with trained personnel. At the end of the 2002 survey season, SNP will meet with biologists from the

Service, the Arizona Game and Fish Department (AGFD) personnel, and other qualified biologists to assess results and further refine SNP's surveys for the next three years (2003 to 2005).

For trail rehabilitation projects only: SNP proposes to conduct a comprehensive park-wide CFPO inventory effort to be used in place of the Service-recommended project clearance surveys.

For all new trail construction: SNP will conduct two consecutive years of CFPO spring surveys as specified by the Service, using the approved protocol for project clearance, with trained personnel.

With CFPO scientists, experts, and current literature, as well as input from wildlife biologists (pages 11 and 12, BA), SNP developed criteria for identifying the highest-quality CFPO habitat that occurred in the park. Park habitats that met the criteria are the mesic to semi-mesic areas with riparian/xeroriparian/bosque components, areas where desert woodland meets dense columnar cactus stands, and the bajada areas where drainages converge (Figure 6, BA). There are 10 routes (five in the Rincon Mountain District [RMD] and five in the Tucson Mountain District [TMD]) identified as the highest-quality CFPO habitat in the park. SNP proposes to conduct appropriate CFPO spring surveys from 2001 through 2005 on the 10 routes described above (the life of this plan).

SNP designated two CFPO habitat categories for the remaining park lands: I and II. Both categories include lands below 4,000 feet in elevation; both categories contain potential CFPO habitat characteristics. The difference is that Category I covers lands on the bajadas and below them; Category II covers the steeper and rockier slopes and lands above the bajadas. SNP proposes to conduct appropriate CFPO spring surveys in lands designated as Category I. There are 23 routes (in washes or on trails) designated for surveys for 2001 and 2002 (nine occur within the Rincon Mountain District and 14 in the Tucson Mountain District). After the 2002 spring surveys, SNP proposes to host a meeting of CFPO biologists, experts, scientists, and other qualified individuals, to report survey results and discuss survey strategy and possible options for the 2003 through 2005 surveys (page 15, BA).

The final result anticipated is that SNP will have appropriately surveyed all CFPO habitat and potential habitat that occurs in the park. Should CFPO or nests be found in the park, it will be immediately reported to the Service. SNP will conduct a detailed analysis of effects of the trailwork on such a site. If trailwork occurs within 600 meters of a CFPO, SNP will immediately halt work and reinitiate consultation with the Service. Trail work in that location will not resume until consultation is completed. SNP will continue annual monitoring of such CFPO sites.

STATUS OF THE SPECIES

Cactus ferruginous pygmy-owl (CFPO)

A detailed description of the life history and ecology of the CFPO may be found in the *Birds of North America* (Proudfoot and Johnson 2000), *Ecology and conservation of the cactus ferruginous pygmy-owl in Arizona* (Cartron et al. 2000a), and other information available at the Arizona Ecological Services Field Office in Phoenix.

The Service listed the Arizona population of the CFPO as a distinct population segment (DPS) on March 10, 1997, effective April 9, 1997 (United States Fish and Wildlife Service 1997). The past and present destruction, modification, or curtailment of habitat are the primary reasons for the decrease in population levels of the CFPO.

On July 12, 1999, the Service designated approximately 731,712 acres critical habitat supporting riverine, riparian, and upland vegetation in seven critical habitat units, located in Pima, Cochise, Pinal, and Maricopa counties in Arizona (United States Fish and Wildlife Service 1999). Only lands containing, or likely to develop, those habitat components that are essential for the primary biological needs of the owl and requiring special management are considered critical habitat. By definition, all areas above 4,000 feet in elevation, areas not containing or capable of developing constituent elements (e.g., saguaro, large diameter trees, etc.), existing features and structures (e.g., roads, buildings, etc.), and areas not requiring special management or other areas (e.g., National Parks, Tribal lands, etc.) were excluded and are not critical habitat. The actual area meeting this definition as defined in the final rule is substantially less than the total area within the exterior boundaries of the area designated. SNP is not located in critical habitat.

Life history

CFPOs are small birds, averaging 6.75 inches in length. Reddish-brown overall, with a cream-colored belly streaked with reddish-brown, the CFPO is crepuscular/diurnal, with a peak activity period for foraging and other activities at dawn and dusk. During the breeding season, they can often be heard calling throughout the day, but most activity is reported between one hour before sunrise to two hours after sunrise, and late afternoon/early evening from two hours before sunset to one hour after sunset (Collins and Corman 1995).

A variety of vegetation communities are used by CFPOs; riparian woodlands, mesquite “bosques” (Spanish for woodlands), Sonoran desert scrub, and mesquite-invaded, semidesert grassland communities, as well as nonnative vegetation within these communities. While plant species composition differs among these communities, there are certain unifying characteristics such as the presence of vegetation in a fairly dense thicket or woodland, the presence of trees or saguaros large enough to support cavity nesting, and elevations below 4,000 feet.

Historically, CFPOs were associated with riparian woodlands in central and southern Arizona. Plants present in these riparian communities include cottonwood, willow (*Salix* spp.) and hackberry (*Celtis* spp.). Cottonwood trees are suitable for cavity nesting, while the density of mid- and lower-story vegetation provides necessary protection from predators and an abundance of prey items for the CFPO. Mesquite bosque communities are dominated by mesquite trees, and are described as mesquite forests due to the density and size of the trees.

Over the past several decades, CFPOs have been primarily found in the Arizona Upland Subdivision of the Sonoran Desert, particularly Sonoran desertscrub (Brown 1994). This community in southern Arizona consists of paloverde, ironwood, mesquite, acacia, bursage (*Ambrosia* spp.), and columnar cacti (Phillips et al. 1964, Monson and Phillips 1981, Davis and Russell 1984, Johnson and Haight 1985, and Johnsgard 1988). Over the past several years, CFPOs have also been found in riparian and xeroriparian habitats and semidesert grasslands as classified by Brown (1994). Desertscrub communities are characterized by an abundance of saguaros or large trees, and a diversity of plant species and vegetation strata. Xeroriparian habitats contain a rich diversity of plants that support a wide array of prey species and provide cover. Semidesert grasslands have experienced the invasion of mesquites (*Prosopis velutina*) in uplands and linear woodlands of various tree species along bottoms and washes.

The density of trees and the amount of canopy cover preferred by CFPOs in Arizona is unclear. However, preliminary results from a habitat selection study indicate that nest sites tend to have a higher degree of canopy cover than random sites (Wilcox et al. 2000). Overall, vegetation density may not be as important as patches of dense vegetation with a developed canopy layer interspersed with open areas. The physical settings and vegetation composition varies across *G. brasilianum*'s range and, while vegetation structure may be more important than composition (Wilcox et al. 1999, Cartron et al. 2000a), higher vegetation diversity is found more often at nest sites than at random sites (Wilcox et al. 2000).

CFPOs typically hunt from perches in trees with dense foliage using a perch-and-wait strategy; therefore, sufficient cover must be present within their home range for them to successfully hunt and survive. Their diverse diet includes birds, lizards, insects, and small mammals (Bendire 1888, Sutton 1951, Sprunt 1955, Earhart and Johnson 1970, and Oberholser 1974) and frogs (Proudfoot et al. 1994). The density of annuals and grasses, as well as shrubs, may be important to the CFPO's prey base. Shrubs and large trees also provide protection against aerial predation for juvenile and adult CFPOs and cover from which they may capture prey (Wilcox et al. 2000).

CFPOs are considered non-migratory throughout their range by most authors, and have been reported during the winter months in several locations, including Organ Pipe Cactus National Monument (OPCNM) (R. Johnson unpubl. data, T. Tibbitts, OPCNM unpubl. data). CFPOs begin nesting activities in late winter to early spring. In Arizona, differences between nest sites may vary by as much as two months [Abbate et al. 1996, S. Richardson, Arizona Game and Fish Department (AGFD) unpubl. data]. As with other avian species, this may be the result of a second brood or a second nesting attempt following an initial failure (Abbate et al. 1996).

Telemetry studies in Arizona during 1999 resulted in dispersal distances ranging from 1.4 to 12.9 miles (straight line distance) (n=6, mean 6.2 miles) (S. Richardson, AGFD unpubl. data). Juveniles typically dispersed from natal areas in July and did not appear to defend a territory until September. They may move up to one mile in a night; however, they typically fly from tree to tree instead of long single flights (S. Richardson, AGFD unpubl. data). Subsequent surveys during the spring have found that locations of male CFPOs are in the same general location as last observed the preceding fall.

Distribution range wide

The CFPO is one of four subspecies of ferruginous pygmy-owl. CFPOs are known to occur from lowland central Arizona south through western Mexico to the States of Colima and Michoacan, and from southern Texas south through the Mexican States of Tamaulipas and Nuevo Leon. It is unclear at this time if the ranges of the eastern and western populations of the ferruginous pygmy-owl merge in southern Mexico. Preliminary results indicate that CFPOs are present in northern and central Sonora (USFWS unpubl. data). Further studies are needed to clarify their distribution in Mexico.

The range of the Arizona population of the CFPO extends from the International Border with Mexico north to central Arizona. The northernmost historic record for the CFPO is from New River, Arizona, about 35 miles north of Phoenix, where Fisher (1893) reported the CFPO to be "quite common" in thickets of intermixed mesquite and saguaro cactus. According to early surveys referenced in the literature, the CFPO, prior to the mid-1900s, was "not uncommon," "of common occurrence," and a "fairly numerous" resident of lowland central and southern Arizona in cottonwood forests, mesquite-cottonwood woodlands, and mesquite bosques along the Gila, Salt, Verde, San Pedro, and Santa Cruz rivers and various tributaries (Breninger 1898, Gilman 1909, and Swarth 1914). Additionally, CFPOs were detected at Dudleyville on the San Pedro River as recently as 1985 and 1986 (Hunter 1988).

Records from the eastern portion of the CFPO's range include a 1876 record from Camp Goodwin (nearby current day Geronimo) on the Gila River, and a 1978 record from Gillard Hot Springs, also on the Gila River. CFPOs have been found as far west as the Cabeza Prieta Tanks in 1955 (Monson 1998).

Hunter (1988) found fewer than 20 verified records of CFPOs in Arizona for the period of 1971 to 1988. Formal surveys for the CFPO on OPCNM began in 1990, with one located that year. Beginning in 1992, survey efforts conducted in cooperation with the AGFD, located three single CFPOs on OPCNM (USFWS and OPCNM unpubl. data). In 1993, surveys were conducted at locations where CFPOs had been sighted since 1970. Only one CFPO was detected during these survey periods, and it was located in northwest Tucson (Felley and Corman 1993). In 1994, two CFPOs were located in northwest Tucson during informal survey work by AGFD (Abbate et al. 1996). In 1996, AGFD focused their survey efforts in northwest Tucson and Marana. A total of 16 CFPOs were detected, two of which were a pair, and two were fledglings. Three additional CFPOs were detected at OPCNM in 1996. There were also three additional, but unconfirmed, reports of CFPOs from OPCNM.

While the majority of Arizona CFPO detections in the last six years have been from the northwest Tucson area, CFPOs have also been detected in southern Pinal County, at OPCNM, on the Buenos Aires National Wildlife Refuge (BANWR), and on the Coronado National Forest (CNF).

In 1997, survey efforts by AGFD located 10 CFPOs in the Tucson Basin study area (that area bounded to the north by the Picacho Mountains, to the east by the Santa Catalina and Rincon Mountains, to the south by the Santa Rita and Sierrita Mountains, and to the west by the Tucson Mountains). Of the eight CFPOs documented from this area, one pair successfully fledged four young. Two adult male CFPO were also located at OPCNM, with one reported from a previously unoccupied area (T. Tibbitts, OPCMN pers. comm. 1997).

In 1998, survey efforts in Arizona increased substantially and, as a result, more CFPOs were located and documented, which may account for a larger number of known owls. In 1998, a total of 35 CFPOs were confirmed (S. Richardson, AGFD unpubl. data, USFWS unpubl. data, T. Tibbitts, OPCNM unpubl. data, D. Bieber, CNF unpubl. data).

In 1999, 41 adult CFPOs were found in Arizona at 28 sites. Of these sites, 10 were nest sites confirmed by AGFD and the Service. CFPOs were found in three distinct regions of the state; Tucson Basin, Altar Valley, and OPCNM. Overall mortality was documented for a number of fledglings due to natural (e.g., predation) or unknown causes. Of the 33 young found, only 16 were documented as surviving until dispersal (juveniles known to have successfully dispersed from their natal area). It is unclear what the survival rate for CFPOs is; however, as with other owls and raptors, a high mortality (50 percent or greater) of young is typical during the first year of life.

Surveys conducted in Spring 2000 resulted in 24 confirmed CFPO sites and several other unconfirmed sites (S. Richardson, AGFD unpubl. data, T. Tibbitts, OPCNM unpubl. data, USFWS unpubl. data). A total of 34 adult CFPOs were confirmed. Nesting was documented at seven sites and 23 fledglings were confirmed; however, as in 1999, a greater than 50 percent fledgling mortality was documented (S. Richardson, AGFD unpubl. data). A total of nine CFPO juveniles were known to have successfully dispersed from their natal areas in 2000. Successful dispersal was not confirmed at two nests with four fledglings. The status of the remaining fledglings is unknown; however, they are presumed dead.

1. Tucson Basin - A total of 14 adults were confirmed at 10 sites (11 adults at seven sites in northwest Tucson and three adults at two sites in southern Pinal County). Three nests in northwest Tucson produced 10 fledglings, of which five juveniles successfully dispersed. One nest in southern Pinal County produced five fledglings, of which two juveniles successfully dispersed. There were several unconfirmed CFPO sites.

2. Altar Valley - A total of seven adult CFPOs were documented at six sites. One nest was confirmed, producing four fledglings, of which four juveniles successfully dispersed from their natal area.

3. OPCNM - Six sites were confirmed as active, although nesting was not confirmed at any of these sites.

4. Other - There were two confirmed CFPO nest sites reported elsewhere in southern Arizona, producing four fledglings. It is unknown how many of these young successfully dispersed. There were several other reported, but unconfirmed, CFPO sightings elsewhere in the state.

Threats

One of most urgent threats to CFPOs in Arizona is the loss and fragmentation of habitat (USFWS 1997, Abbate et al. 1999). The complete removal of vegetation and natural features required for many large scale and high-density developments directly and indirectly impacts CFPO survival and recovery (Abbate et al. 1999).

In northwest Tucson, all currently known CFPO locations, particularly nest sites, are in low-density housing areas where abundant native vegetation separates structures. Additionally, they are adjacent to or near large tracts of undeveloped land. CFPOs appear to use non-native vegetation to a certain extent, and have been observed perching in non-native trees in close proximity to individual residences. However, the persistence of CFPOs in areas with an abundance of native vegetation indicates that a complete modification of natural conditions likely results in unsuitable habitat conditions for CFPOs. While development activities are occurring in close proximity to owl sites, particularly nest sites, overall noise levels are low. Housing density is low, and as a result, human presence is also generally low.

The CFPO has declined throughout Arizona to the degree that it is now extremely limited in distribution in the state (Johnson et al. 1979, Monson and Phillips 1981, Davis and Russell 1984, Johnson-Duncan et al. 1988, Millsap and Johnson 1988, Monson 1998). A very low number of CFPOs in riparian areas in recent years may reflect the loss of habitat connectivity rather than the lack of suitability (Cartron et al. 2000b).

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all federal, state, or private actions in the action area; the anticipated impacts of all proposed federal actions in the action area that have undergone formal or early section 7 consultation; and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR §402.02). The Service has determined that the action area is all park lands administered by SNP within a 16-mile radius of the project site, which could be any portion of a trail being worked on at any one time.

Status of CFPO in action area

Both districts of SNP contain potential CFPO habitat. Almost all lands located in the TMD and lands in the RMD below 4,000 feet in elevation are potential CFPO habitat, totaling about 40,000 acres.

SNP records of unconfirmed reports of CFPO (prior to 1994) indicate that CFPO may have inhabited both districts of the SNP (BA). Formal protocol surveys for the species began in 1994 and continue to the present season, resulting in about 50 surveys conducted in each district. Throughout these years of formal surveys, SNP records indicate one CFPO response documented on October 12, 1995, in the RMD's Box Canyon area.

EFFECTS OF THE ACTION

Direct effects may include localized dust and noise at a single work location during the CFPO breeding season which may affect unknown/undetected CFPO in or passing through the area.

Trail Rehabilitation

Suitable CFPO habitat is not anticipated to be significantly affected during trail rehabilitation projects. Anticipated noise effects will be frequent daytime noise at relatively loud levels (power tools and jackhammers) and moderate levels of dust occurring in the immediate area of the work in progress. Progress along a trail will be at a steady but slow pace; a trail may take as few as three weeks or as long as eight weeks for rehabilitation. Each trail and the degree of work needed is site-specific, and daytime summer temperatures can make outdoor work a safety concern, as well as dictate speed on a project. Work crews will not work during crepuscular (dawn and dusk) hours. Vegetation removal will **not** occur as a result of rehabilitation work.

Trail Construction

While trail construction tends to affect natural resources and vegetation communities at a higher level (some shrub and bush removal) than rehabilitation projects, new trails will be routed around saguaros and trees. Vegetation anticipated for removal is primarily scattered and isolated brush and shrubs, and rockier surfaces will be used where feasible for reduced vegetation removal. Noise and dust levels are anticipated to be similar to those for trail rehabilitation, and will have the same concerns for safety.

Individual CFPOs may react differently to noise disturbance and varying levels, with some birds showing less tolerance than others. Noise can affect animals by disturbing them to the point that detectable change in behavior may occur. Such behavioral changes can affect their activity and energy consumption (Bowles 1995). Dangerous or unfamiliar noises are more likely to arouse wildlife than harmless and familiar noises. Habituation is the crucial determinant of success in the presence of noisy disturbances. Exposures of some experienced birds may produce no or minimal losses (Black et al. 1984). The habituation process can occur slowly, so it may not be detected in the short-term. It is unknown if noise habituation occurs in some CFPOs as it does with other bird species. Robert and Ralph (1975), Schreiber (1979), Cooke (1980), Parsons and

Burger (1982), Ainley et al. (1983), and McNicholl (1983) found that adult birds, and chicks to some extent, habituated to the presence of humans, and their responses to people seemed to be less than those of undisturbed birds. Burger and Gochfeld (1981) and Knight et al. (1987) found responses to noise disturbances and habituation in nesting birds become more tenacious and less responsive in the presence of human disturbance if they were not deliberately harassed.

Raptors in frequent contact with human activities tend to be less sensitive to additional noise disturbances than raptors nesting in remote areas. However, exposure to direct human harassment may make raptors more sensitive to noise disturbances (Newton 1979). Where prey is abundant, raptors may even occupy areas of high human activity, such as cities and airports (Newton 1979, Ratcliffe 1980, White et al. 1988). The timing, frequency, and predictability of the noise disturbance may also be factors. Raptors become less sensitive to human disturbance as their nesting cycle progresses (Newton 1979). Studies have suggested that human activities within breeding and nesting territories could affect raptors by changing home range movements (Anderson et al. 1990) and causing nest abandonment (Postovit and Postovit 1987, Porter et al. 1973).

The Service notes an indirect effect will be increased foot and horseback traffic on constructed trails and potential disturbance to CFPO in the area. These trails would allow access through very short segments of SNP lands that were not traveled by people before the trails formally existed. The Service notes that the locations and placement of the constructed trails are scattered, very short segments that will connect existing trails to one another as loops and will facilitate egress and exit at selected sites located on SNP boundary lines. The total length of constructed trails is anticipated to be less than 2.0 miles in the action area for the next five years.

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 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.

Because of the extent of public lands in the action area, most future activities will be Federal actions subject to the section 7 process and these are not considered cumulative. Development of private lands is expected to occur outside of SNP boundaries. Non-federal activities that may affect the CFPO can be addressed through the section 10(a)(1)(A) permit process.

CONCLUSION

After reviewing the current status of the CFPO, the environmental baseline for the action area, the effects of the proposed five-year trail work plan, 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 CFPO. Critical habitat does not occur in the action area, thus none will be affected.

We base our determination on the following:

1. CFPO critical habitat is not involved or affected by the project.
2. Formal surveys have been conducted since 1994 in the action area. One response has been documented but the location will not be affected by this project.
3. Should CFPO surveys locate a CFPO or nest, work will immediately halt and SNP will reinstate consultation with the Service. Work at that location will not resume until consultation is complete.
4. Trees and saguaros (two feet or taller) will not be removed; trails will be carefully routed to avoid them. Scattered brush and shrubs will be removed for some short new trail segments. This will not be a temporal setback for potential CFPO habitat to continue growth into nesting habitat.
5. Noise and dust is anticipated to be localized and to occur during daylight (not crepuscular) hours.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special 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 is further defined by the Service to 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 to such an extent as to significantly disrupt normal behavior 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.

ANTICIPATED TAKE

The Service does not anticipate the proposed action will result in the incidental take of CFPO.

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 plans, or to develop information.

1. SNP should promote visitor awareness and education about the CFPO and its specific biological needs.
2. SNP should continue to survey SNP lands for CFPO, annually.
3. SNP should assist the Service in implementing the CFPO Recovery Plan, once the plan is finalized.

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

REINITIATION NOTICE

This concludes formal consultation on the actions outlined in your request for formal section 7 consultation. 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) 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 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.

The Service appreciates your efforts on behalf of listed species and the public lands they inhabit. Please contact Thetis Gamberg at (520) 670-4619 or Sherry Barrett at (520) 670-4617 with further concerns or questions. Please refer to the consultation number 2-21-01-F-014 in future correspondence concerning this project.

/s/ David L. Harlow

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)

Terry Johnson, Nongame Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ

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