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In Reply Refer To:
AESO/SE
02-21-05-F-0347

November 23, 2005

Ms. Cindy Lester
Chief, Arizona Section, Regulatory Branch
U.S. Army Corps of Engineers
Arizona-Nevada Field Office
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1936

RE: 2005-00423-MB

Dear Ms. Lester:

Thank you for your January 27, 2005 request for formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. *et. seq.*, ESA). At issue are impacts that may result to the endangered Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*) (PPC) from the proposed issuance of a Section 404 permit under the Clean Water Act (CWA) to construct a residential subdivision, Andrada Ranch, in unnamed washes (Section 3, T17S, R16E) located in Corona de Tucson, Pima County, Arizona. You have determined that the project may adversely affect PPC.

You have also requested concurrence on your determination that the project may affect, but is not likely to adversely affect, the endangered cactus ferruginous pygmy-owl (CFPO) (*Glaucidium brasilianum cactorum*). Our concurrence is provided in Appendix A.

This biological opinion (BO) is based on information provided in the November 18, 2004, biological assessment (BA) (prepared by WestLand Resources, Inc.), the supplemental report to the BA (prepared by WestLand Resources, Inc.), meetings, and other sources of information. Literature cited in this BO is not a complete bibliography of all literature available on the species of concern, the effects from residential development, the project area, or other subjects considered in this opinion. A complete administrative record of this consultation is on file at the Arizona Ecological Services Field Office.

Consultation History

January 31, 2005: We received your request for formal consultation.

March 31, 2005: We met with you, the applicant, and their consultant to discuss project effects and potential conservation measures.

July 20, 2005: We transmitted our draft BO for Andrada Ranch to the Army Corp of Engineers (COE).

September 14, 2005: We received the Supplemental Report to the Biological Assessment of Andrada Ranch from the applicant's consultant.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The applicant proposes to construct a residential development, known as Andrada Ranch, on 79.2 acres of vacant land south of Andrada Road in unincorporated Pima County. It is approximately 1.2 miles south of Interstate 10. The area lies within T17S, R16E, in the northeast quarter of Section 3. The project is designed for 74 single-family homes with an overall density of 0.93 residences per acre. Approximately 22.14 acres (28.0 percent) of the site will remain as "natural open space" (NOS) protected by a restrictive covenant. The NOS is centered around the wash courses and includes areas located between the individual lots and around the perimeter of the project. Grading will be limited to that area for the home, driveway, and yard improvements, not to exceed 20,000 square feet. The development blocks will not be mass-graded. Total disturbance for the 74 home sites will not exceed 33.98 acres (42.9 percent) of the project site. A total of 1.56 acres (0.02 percent) on 10 individual lots are set aside as PPC mitigation areas, which will be protected in perpetuity by deed restrictions. The remaining 10.37 acres within individual lots (13.1 percent) that are not graded will be maintained as NOS and protected in perpetuity by Covenants, Conditions, and Restrictions (CC&Rs). Roadways within the project area encompass 11.15 acres (14.1 percent).

A total of 35 live PPC were detected on the 79.2-acre site during surveys completed in 2003 and 2004. Additional information, maps, and other details are provided in the November 2004 BA, and are incorporated herein by reference.

Proposed Conservation Measures

The applicant and Corps of Engineers (COE) propose the following conservation measures to minimize the effects to PPC and its habitat.

- The applicant is setting aside 22.14 acres of NOS that will be protected by a restrictive covenant. Three PPC on the site are located within the proposed NOS.

- The applicant is designating 1.56 acres on 11 of the 12 lots that contain PPC as PPC mitigation areas. The PPC within these areas will be protected in perpetuity by deed restrictions on these lots. A total of 16 PPC fall within these areas.
- The applicant will maintain 10.37 acres within the development envelope but outside of the 20,000 square foot grading area as NOS, which will be protected in perpetuity by CC&Rs.
- PPC that are in the path of development will be transplanted to appropriate habitat within the NOS or applicable undisturbed lands on site. Sixteen PPC will be transplanted.
- PPC grown from seed collected on the site will be available for re-planting on suitable areas within Andrada Ranch.
- PPC seedlings and transplanted PPC will be monitored for a period of three years. Monitoring and maintenance of transplants will occur nine times during the first year, four times during the second year, and twice during the third year. Information gathered during this effort will be provided to us and the COE during the first quarter of each year following the monitoring year.
- The applicant will purchase 35 acre-credits to offset the effects to PPC by development of this site. In the event credits are not available, the money will be put into an account until such time as credits or some other use acceptable to us is identified. The purchase or deposit of funds shall occur prior to the initiation of lot-grading activities.

STATUS OF THE SPECIES

PPC

Life History

The final rule listing PPC as endangered was published on September 23, 1993 (58 FR 49875). No critical habitat has been designated. PPC occurs south of Tucson, in Pima and Santa Cruz counties, Arizona and adjacent northern Sonora, Mexico. It is distributed at very low densities throughout both the Altar and Santa Cruz valleys, and in low-lying areas connecting the two valleys. Factors that contributed to the listing include habitat loss and degradation, habitat modification and fragmentation, limited geographic distribution and species rareness, illegal collection, and difficulties in protecting areas large enough to maintain functioning populations. The biological information below is summarized from the proposed and final rules and other sources.

Habitat fragmentation and isolation may be an important factor limiting future seed set of this cactus. Recent data show that the species cannot successfully self pollinate in situ and is reliant on invertebrate pollinators. One hypothesis is that the spatial distribution pattern of individual Pima pineapple cacti within a given area may regulate pollinator visitations, thus affecting successful cross-pollination and subsequent seed set over the population (Roller 1996). If the

pollinators are small insects with limited ability to fly over large distances, habitat fragmentation may contribute to a decrease in pollinator effectiveness with a subsequent decrease in seed set and recruitment.

Population Stability

Extrapolations from 1992-1997 surveys of known PPC locations suggest that the cactus may be more numerous than previously thought. Projections based only on known individuals may underestimate the total number of individuals. This in no way indicates that the cactus is not rare or endangered. PPC is widely dispersed in very small clusters across land areas well-suited for residential, commercial, or mining development. Field observations suggest that a great deal of land area within the range boundaries would not support PPC today due to historical human impacts. Thus, populations are already considerably isolated from each other in many portions of the range, and population size and apparent recruitment varies significantly across the range. On a more local scale, population variability may relate to habitat development, modification, and/or other environmental factors such as slope, vegetation, pollinators, and dispersal mechanisms.

The transition zone between the two regions of vegetation described by Brown (1982) as semidesert grassland and Sonoran Desert scrub contains denser populations, better recruitment, and individuals exhibiting greater plant vigor. Vegetation within this transition zone is dominated by mid-sized mesquite trees, half shrubs (snakeweed, burroweed, and desert zinnia), and patches of native grass and scattered succulents. Because populations are healthier in this transition zone, conservation within these areas is very important (Roller and Halvorson 1997). However, this important habitat type is not uniformly distributed throughout the plant's range. Populations of Pima pineapple cacti are patchy, widely dispersed, and highly variable in density. The higher population densities have only been documented at three sites. Compared to other surveys, two of these sites are very small in scale and range from 1-3 plants per acre. Other densities across the majority of the plant's range vary between one plant per 4.6 acres and one plant per 21 acres (Mills 1991, Ecosphere 1992, Roller 1996).

Land areas surrounding developed parts of Green Valley and Sahuarita, Arizona (including adjacent areas of the San Xavier District of the Tohono O'odham Nation), may be important for the conservation of this species within its range. As stated above, analysis of surveys conducted from 1992 to 1995 with a multivariate statistical analysis documented a pattern of greater population densities, higher ranks of cactus vigor, and better reproduction occurring within the transition vegetation type found in this area of the northern Santa Cruz Valley (Roller and Halvorson 1997). This area could be defined as an ecotone boundary between semidesert grassland and Sonoran desert scrub.

Status and Distribution

Generally, the PPC grows on gentle slopes of less than 10 percent and along the tops (upland areas) of alluvial bajadas nearest to the basins coming down from steep rocky slopes. The plant is found at elevations between 2,360 ft. and 4,700 ft. (Phillips *et al.* 1981, Benson 1982,

Ecosphere 1992), in vegetation characterized as either or as combination of the Arizona upland of the Sonoran Desert scrub and semidesert grasslands (Brown 1982).

Densities range between 0.05-3 plants per acre. PPC is known to occur in 50 townships within its U.S. range. However, a considerable amount of land area within the range boundaries does not provide habitat for the species due to elevation, topography, hydrology, plant community type, and human degradation. To date, an estimated 56,730 acres, or 10 to 20 percent of the U.S. range, have been surveyed. Not all of this area has been intensively surveyed; some has only been partially surveyed using small land blocks to estimate densities rather than 100 percent ground surveys. A conservative estimate of total cacti located to date would be approximately 4,000 individuals. The majority of those were located after 1991.

It is important to clarify that the above number represents the total number of locations ever found and not the current population size. It would be impossible to estimate densities over the remaining unsurveyed area because of the clumped and widely dispersed pattern of distribution of this species. Of the approximately 4,000 individuals recorded to date, 2,212 (55 percent) of them have been removed. This includes observed and authorized mortalities and individuals transplanted since the species was listed in 1993. A small portion of these mortalities was caused by natural factors (i.e., drought). Moreover, this figure does not take into account those cacti that are removed from private land or lost to other projects that have not undergone section 7 reviews.

Transplanted individuals are not considered as functioning within the context of a self-sustaining population. Efforts to transplant individual cacti to other locations have had only limited success, and the mortality rate has been high, especially after the first year. Furthermore, once individuals are transplanted from a site, it is considered to be extirpated as those individuals functioning in that habitat are irretrievably lost. We view transplanting cacti as a measure of last resort for conserving the species. Transplanting will be recommended only when on-site and off-site habitat conservation is not possible and the death of cacti is unavoidable.

The area of habitat reviewed under section 7 of the ESA between 1987 and 2000 (i.e., habitat developed or significantly modified beyond the point where restoration would be a likely alternative) is approximately 24,429 acres, which represents 43 percent of the total area surveyed to date. In 1998, more than 1,100 acres of PPC habitat were lost including 752 acres from the ASARCO, Inc. Mission complex project. In 2000, 586 acres of habitat were lost with the expansion of a state prison in Tucson. In 2001, 177 acres of habitat were lost through development, but 888 acres of occupied and suitable habitat were conserved through conservation easements. In 2002-2003, 76.5 acres of occupied habitat were destroyed, but 36 acre-credits were purchased in the PPC conservation bank, thus protecting 36 acres of PPC habitat; and an additional 58.5 acres of PPC habitat were conserved in a conservation easement. We are aware of housing developments along Valencia Road, Pima County, Arizona, in the vicinity of T15S, R12E, Section 15 and surrounding areas, which support PPC. These developments affect several hundred acres of habitat and have not been evaluated through the section 7 process. The number of acres lost through private actions, not subject to Federal jurisdiction, is not known but, given the rate of urban development in Pima County, we believe it is significant.

Based on surveys and habitat analysis, areas south of Tucson through the Santa Cruz Valley to the town of Amado and surrounding developed parts of Green Valley and Sahuarita, and parts of the San Xavier District of the Tohono O'odham Nation, appear to support abundant populations, some recruitment, and units of extensive habitat still remain. However, the primary threat to the status of this species throughout its range is the accelerated rate (i.e., since 1993) at which much of the prime habitat is being developed, fragmented, or modified.

Most of the documented habitat loss has occurred south of Tucson through the Santa Cruz Valley to the town of Amado. This area is critical for the future recovery of the species. The expansion of urban centers, human population, and mining activities will continue to eliminate habitat and individuals, and result in habitat fragmentation.

The protection of habitat and individuals is complicated by the varying land ownership within the range of this species. An estimated 10 percent of the potential habitat for PPC is held in Federal ownership. The remaining 90 percent is on Tribal, State, and private lands. Most of the federally owned land is either at the edge of the plant's range or in scattered parcels. The largest contiguous piece of federally owned land is the Buenos Aires National Wildlife Refuge, located at the southwestern edge of the plant's range at higher elevations and with lower plant densities.

The Arizona Native Plant Law may delay vegetation clearing on private property for the salvage of specific plant species within a 30-day period. Although the Arizona Native Plant Law prohibits the illegal taking of this species on State and private lands without a permit for educational or research purposes, it does not provide for protection of plants in situ through restrictions on development activities.

Based on current knowledge, urbanization, farm and crop development, and exotic species invasion alter the landscape in a manner that would be nearly irreversible in terms of supporting PPC populations. Prescribed fire can have a negative effect if not planned properly.

Other specific threats that have been previously documented (U.S. Fish and Wildlife Service 1993), such as overgrazing and mining, have not yet been analyzed to determine the extent of effects to this species. However, partial information exists. Mining has resulted in the loss of hundreds, if not thousands, of acres of potential habitat throughout the range of the plant. Much of the mining activity has been occurring in the Green Valley area, which is the center of the plant's distribution and the area known to support the highest densities of individuals. Overgrazing by livestock, illegal plant collection, and fire-related interactions involving exotic Lehmann lovegrass (*Eragrostis lehmanniana*) may also negatively affect PPC populations (U.S. Fish and Wildlife Service 1993).

In summary, monitoring has shown that the range-wide status of the PPC appears to have been recently affected by threats that have completely altered or considerably modified more than a third of the species' surveyed habitat, and have caused the elimination of nearly 60 percent of documented locations. Dispersed, patchy clusters of individuals are becoming increasingly isolated as urban development, mining, and other commercial activities continue to detrimentally impact the habitat. The remaining habitat also is subject to degradation or modification from

current land-management practices, increased recreational use when adjacent to urban expansion (i.e., off-road vehicle use and illegal collection), and the continuing aggressive spread of nonnative grasses into habitat. Habitat fragmentation and degradation will likely continue into the foreseeable future based on historical data and growth projections produced by the Pima County Association of Governments (1996). There is very little Federal oversight on conservation measures that would protect or recover the majority of the potential habitat. Even some areas where section 7 consultations have been completed have been modified and may not be able to support viable populations of the PPC over the long-term.

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 from which to assess the effects of the action now under consultation.

The action area is defined as the footprint of the entire development (79.2 acres) and a 0.25-mile area surrounding the project boundaries, the latter of which encompasses the area most likely to incur indirect effects from the housing development. PPC are also suspected to occur on undeveloped lands surrounding the project because we know of PPC locations within 2 miles of the action area. The action area is surrounded by planned residential development to the north, private property zoned for development to the west and south, and as-yet-undeveloped State land to the east. This area is rapidly developing, and several large housing subdivisions are being built to the north and west of the action area. PPC are known from these areas, but several projects did not undergo section 7 consultation. There will undoubtedly be continued new residential development in those areas.

A total of 35 live PPC were detected within the 79.2-acre parcel. The applicant has agreed to protect 22.14 acres in a NOS designation, but most of this area falls within washes and xeroriparian habitat; areas not suitable for PPC. Three PPC fall within this area. An additional 10.37 acres of as yet undefined NOS will be added after the 20,000 square foot grading footprint has been designated. Sixteen PPC fall within the gradable area; some of these may fall within this additional NOS, but all sixteen may need to be transplanted. Eleven lots will have deed restrictions placed on them that set aside 1.56 acres as PPC mitigation areas. Sixteen PPC fall within this area. All NOS and PPC mitigation areas are within individual lots, as no common area has been designated for this project. PPC that are in the development zone on the lots will be transplanted into the NOS or suitable areas within the subdivision. The density of PPC on this site is 0.44 PPC/acre. This density falls within our calculated above-average density (> 0.31 PPC/acre). Our density calculations were determined using all the projects that have undergone section 7 consultations, along with more recent surveys.

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 or interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The proposed action will result in the development and/or modification of 79.2 acres of PPC habitat, and, almost certainly, the loss of some of the PPC on the site (the BA estimates 16 PPC). This development will remove at least 45 percent of the suitable habitat on-site (approximately 20,000 sq. ft. x 74 residences) and fragment what habitat remains. The new roads will further fragment the remaining habitat. The applicant cannot determine exactly how many PPC may be affected by the development because the configuration on each lot has not been decided.

Those PPC that need to be transplanted will be moved to appropriate habitat within the NOS or applicable undisturbed (e.g., designated PPC mitigation areas) lands on site. The BA states that “WestLand will insure that the trans-located PPC plants and seedlings are placed in an ecological setting appropriate for their survival...” and that the transplanted PPC will be monitored for a period of three years. However, the movement of plants into the NOS or applicable undisturbed lands is not considered a meaningful conservation measure. Transplanted PPC have low levels of survival, and past efforts to transplant individual PPC to other locations have had only limited success. On a project in Green Valley, where transplanted PPC were monitored for survival for two years following their transplant, there was a 24% mortality rate (SWCA, Inc. 2001). On another project in Green Valley, PPC transplanted in 2001 showed 66% mortality after two years (WestLand Resources, Inc. 2004). On another property in Green Valley, there was at least 15% mortality of transplanted PPC after 4 months (Pima County Development Services 2003). As a result, the transplanted PPC are not likely to contribute significantly to the overall population. There is also the unquantifiable loss of the existing PPC seed bank associated with the loss of suitable habitat.

PPC that will not be directly affected by the development, but that occur within the action area, will almost certainly be affected by the residential development. The BA states that 19 PPC will be left in place within individual lots. Those PPC are marked on the map in the BA as being within areas designated as PPC mitigation areas (16 PPC) or NOS (3 PPC), and would be off-limits to construction. The BA states that these areas will be protected by Covenants, Conditions, and Restrictions (CC&Rs) and deed restrictions, although the BA does not provide details. However, we find it doubtful that the PPC and habitat would not be affected by residents’ use of their property (e.g. creating trails, landscaping, bike riding, and pets) which can degrade PPC habitat. Even with oversight from a homeowner’s association, the PPC could be inadvertently destroyed. New residential developments often introduce non-native plants into an area, creating more opportunity for degradation of the remaining natural habitat. These indirect effects will contribute to the overall deterioration of the remaining PPC in this area. While some

conservation may be achieved, there is no evidence to support this type of measure as producing long-term protection for PPC and its habitat.

Another proposed conservation measure for this project is the collection of PPC seed on-site and growing plants in a greenhouse, for eventual transplanting back on the site. This component of the proposed action is to meet the requirements of Pima County's Native Plant Protection Ordinance (NPPO) which allows for the transplantation of PPC from on-site, along with one additional PPC for each one transplanted. To meet this requirement, the applicant is proposing to plant young PPC back on the site. If post-transplant monitoring indicates that a PPC seedling has perished, it will be replaced. While some survival of seedlings can be expected, this measure does not provide for conservation of PPC habitat.

The applicant proposes to offset the effects to PPC and its habitat by purchasing conservation bank credits in a Service-approved conservation bank for PPC. The density of PPC in the action area suggests that the area supports above-average quality habitat. The applicant has agreed to compensate for the loss of habitat by purchasing 35 acre-credits.

In summary, this project will result in the loss and/or alteration of all suitable PPC habitat (approximately 79.2 acres), and, most likely, the subsequent loss of the 35 PPC on the site. The applicant proposes to purchase 35 acre-credits from an approved PPC conservation bank to offset this loss. All of the proposed conservation measures may provide some conservation for PPC, but do not promote the conservation of the species over the long-term. They are mainly focused on the replacement of PPC and not the conservation of PPC habitat.

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.

The area immediately to the east is undeveloped State trust lands. Those lands are not protected and can be sold for development. Areas to the north, west and south are private lands zoned for residential and commercial development. Some development is already occurring on lands to the north. There are likely PPC within the action area that would be affected by development of State and private lands. State trust lands also provide for recreation and open space for the residents of developments in the area. The use of State trust lands for recreation, off-road vehicle use, and illegal dumping of trash can ultimately lead to habitat degradation and possible loss of PPC. If State lands are developed, further fragmentation of the larger PPC population in the general area will result.

Development in this geographic region can be expected to increase. State and private lands not presently developed in the area are quickly becoming urbanized. Much of this development has no Federal nexus. Without any protection under the Act, the only protection available is through the Arizona Native Plant Law, which provides only for salvage for scientific and educational

purposes. The habitat of PPC will continue to be lost, regardless of salvaged cacti transplant success.

In summary, virtually all of the habitat and the individuals of the species in the action area are reasonably certain to be lost in the foreseeable future. There is little regulatory authority that would be expected to reduce those effects.

CONCLUSION

After reviewing the current status of PPC, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of PPC. No critical habitat has been designated; therefore, none will be affected. We make this determination because, while the status of PPC continues to degrade, as discussed above, the loss of the 35 PPC reduces the known population by less than two percent; this loss does not constitute a significant reduction in the conservation status of the species.

INCIDENTAL TAKE STATEMENT

Sections 7(b)(4) and 7(o)(2) of the ESA do not apply to listed plant species. However, protection of listed plants is provided to the extent that the ESA requires a Federal permit for removal or reduction to possession of endangered plants from areas under Federal jurisdiction, or for any act that would remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any regulation of any State or in the course of any violation of a State criminal trespass law. Neither incidental take nor recovery permits are needed from us for implementation of the proposed action.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA 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.

- We recommend that the COE and the applicant develop an educational outreach program about PPC and its habitat for the residents of Andrada Ranch. This program should, at a minimum, include: life history information of PPC; threats to PPC and its habitat; information about PPC on-site; details of the deed restrictions, restrictive covenants, and CC&Rs; and an explanation of how these restrictions affect residents of Andrada Ranch. This program should be administered by the same organization that will enforce the CC&Rs.

In order that we are kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the 79.2-acre Andrada Ranch development. 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 (not applicable to this consultation); (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.

We appreciate your efforts to identify and minimize effects from this project. Please contact Mima Falk (520) 670-6150 (x225) or Sherry Barrett (520) 670-6150 (x223) if you have further questions. Please refer to consultation number 02-21-04-F-0403 in future correspondence regarding this project.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: U.S. Army Corps of Engineers, Tucson, AZ (Attn: Marjorie Blaine)
Assistant Field Supervisor, U.S. Fish and Wildlife Service, Tucson, AZ

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Appendix A

CONCURRENCE

In your January 27, 2005, request for formal consultation, you concluded that the proposed construction of the residential subdivision, known as Andrada Ranch, located in Pima County, Arizona, is not likely to adversely affect the cactus ferruginous pygmy-owl. We concur with your determination for the following reasons:

- The area does not support suitable breeding habitat for pygmy-owls.
- The wash system supports potential pygmy-owl dispersal habitat, but there are no known pygmy-owl nest sites near this project, reducing the likelihood that this dispersal habitat will be used by pygmy-owls.
- The wash systems will be protected because they are within areas designated as natural open space and will be left undisturbed.
- It is highly unlikely that noise disturbance from construction will affect nesting or dispersing pygmy-owls since there are no known sites within 20 miles of this location (the maximum observed dispersal distance for a pygmy-owl).

In summary, the effects to pygmy-owls will be insignificant regarding effects to habitat (lack of suitable breeding habitat and protection of wash systems) and discountable regarding effects from disturbance (negative survey results, no known pygmy-owl sites, and lack of potential habitat).