ORGAN PIPE CACTUS

NATIONAL MONUMENT

Final GENERAL MANAGEMENT PLAN

DEVELOPMENT CONCEPT PLANS

ENVIRONMENTAL IMPACT STATEMENT

Final
General Management Plan/Development Concept Plans
Environmental Impact Statement

Organ Pipe Cactus National Monument

Pima County, Arizona

Type of Statement: This document is an abbreviated Final Environmental Impact Statement and its contents must be integrated with portions of the *Draft General Management Plan/Development Concept Plans/Environmental Impact Statement* (Draft GMP/DCP/EIS) and the *Supplement to the Draft GMP/DCP/EIS* to be considered a complete document reflecting the full proposal, its alternatives and all significant environmental impacts. Please see pages 63 and 64 in this document for a guide to finding the most relevant portions within each document.

Lead Agency: National Park Service

Proposed Actions: The Final General Management Plan/Development Concept Plans/Environmental Impact Statement addresses the issues and changes affecting the monument, and fulfills the legal requirements of the National Park Service (NPS) to develop, make public, and execute a programmatic plan to guide management of the monument over the next 10-15 years.

Of the four alternatives considered, the New Proposed Action Alternative constitutes the NPS' preferred alternative. The concept of this alternative is two-fold: within the region, carry out principles of the Man and the Biosphere (MAB) program by adopting a regional perspective to improve visitor services and conserve resources, and within the monument, improve management capabilities to enhance visitor opportunities and protect resources and wilderness values. To accomplish this, the NPS proposes to:

- seek redesignation of the monument as Sonoran Desert National Park
- work with the State of Arizona, and others, to ensure continued commerce while enhancing resource protection and conservation practices along the portion of State Route 85 within the monument
- use a cost-effective development strategy that utilizes existing facilities with some additions of tent camping, visitor services, maintenance, and other operational needs, and establishes partnerships to share in establishing new facilities to provide for visitor contact, employee seasonal housing and some offices
- re-align the trail network at Quitobaquito Springs area to enhance habitat protection
- increase the amount of wilderness and improve protection of wilderness values through development of an inter-agency Wilderness Management Plan and an overall reduction in the amount of social trails
- stabilize and apply preservation and use treatments for historic properties
- establish an government-to-government agreement with the Tohono O'odham Nation about lands which are sacred to them, ensure adequate and accurate communication, and increase O'odham involvement in interpretive programs
- reduce the impact of adjacent facilities and use on wilderness by seeking a class I airshed designation and by relocating and burying power lines

The overall effect of this alternative would be to enhance protection, understanding, and recognition of Sonoran desert ecosystems and further strengthen relations with the Tohono O'odham Nation, Mexico and other neighbors of the monument.

No substantive changes have been made to this alternative as it was presented in the *Supplement to the Draft GMP/DCP/EIS.* However, reasonable and prudent measures resulting from formal consultation with the U.S. Fish and Wildlife Service on listed species, have been incorporated into the proposed action. One measure resulted in a minor adjustment to the proposed action. To ensure protection of the endangered pygmy-owl, the NPS will prepare a feasibility study before determining if any campsites could be added in the Alamo Canyon Wash campground (the original proposal was to build up to four campsites if conditions allowed). Other measures would include:

- for the lesser long-nosed bat, monitor bat presence, abundance and for human disturbance; prevent unauthorized human disturbance; and not install bat gates until appropriate
- for the Sonoran pronghorn, work with other agencies to reduce effects of State Route 85 traffic; modify Monument border fences; educate motorists about vulnerability of the species; and monitor and restrict human use as and where necessary
- for the cactus ferruginous pygmy-owl, monitor potential effects of visitation on the species; establish closures where owls are detected; and if owls are harassed or otherwise harmed, elicit public awareness about vulnerability of the species

No action may be taken until at least 30 days after the Environmental Protection Agency has accepted the document and published a notice of availability in the Federal Register.

For further information contact: Superintendent, Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

Summary

Forward: This document is an abbreviated Final Environmental Impact Statement and its contents must be integrated with portions of the Draft General Management Plan/Development Concept Plans/Environmental Impact Statement (Draft GMP/DCP/EIS) and the Supplement to the Draft GMP/DCP/EIS to be considered a complete document reflecting the full proposal, its alternatives, and all significant environmental impacts. Please see pages 63 and 64 in this document for a guide to finding the most relevant portions within each document. This plan also attempts to clarify those issues which have recently been under debate, and to present all of the issues in a fair and simple manner. This is being done in response to public comments about the presentation of previous alternative versions of the plan.

Purpose and Need for the Plan

Because of the special nature of Organ Pipe Cactus National Monument (NM), a comprehensive and sensitive plan for the management of its resources needs to be in place. It is the legal responsibility of the National Park Service (NPS) to propose, develop, make public, and execute such a plan.

The last time that a Master Plan was designed for Organ Pipe Cactus NM was 1964. It is now outdated and inadequate to deal with the variety of issues the monument faces. Also, several significant changes have occurred since then, including:

- designation of the monument as a Biosphere Reserve as part of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Man and the Biosphere program
- a new understanding and acknowledgment of the status of the Tohono O'odham Nation and their relationship with this land which is sacred to them, as well as new legislation which has been enacted over the last three decades to protect Native American rights
- elimination of mineral exploration and development, which has allowed the ecosystem to recover somewhat and removal of grazing cattle from the area, which also caused the ecosystem to begin to repair itself

This general management plan was developed to fulfill legal requirements and address the issues and changes affecting the Monument. This plan represents and also serves as the Biosphere Reserve Management Plan.

Major Conclusions

Of the four alternatives considered, the New Proposed Action Alternative constitutes the NPS' preferred alternative. In response to public comments on the *Supplement,* this alternative is summarized in this final document in an attempt to clarify the agency's proposals to all concerned.

The concept of the proposed action is two-fold: within the region, carry out principles of the Man and the Biosphere (MAB) program by adopting a regional perspective to improve visitor services and conserve resources, and within the monument, improve management capabilities to enhance visitor opportunities and protect resources and wilderness values. To accomplish this, the NPS proposes to:

- seek redesignation of the monument as Sonoran Desert National Park
- work with the State of Arizona, and others, to ensure continued commerce while enhancing resource protection and conservation practices along the portion of State Route 85 within the monument
- use a cost-effective development strategy that utilizes existing facilities with some additions, and establishes partnerships to share in new facilities and related costs
- re-align the trail network at Quitobaquito Springs area to enhance habitat protection
- increase the amount of wilderness and improve protection of wilderness values through development of an inter-agency Wilderness Management Plan and an overall reduction in the amount of social trails
- stabilize and apply preservation and use treatments for historic properties
- establish an government-to-government agreement with the Tohono O'odham Nation about lands which are sacred to them, ensure adequate and accurate communication, and increase O'odham involvement in interpretive programs
- reduce the impact of adjacent facilities and use on wilderness by seeking a class I airshed designation and by relocating and burying power lines

The overall effect of this alternative would be to enhance protection, understanding, and recognition of Sonoran desert ecosystems and further strengthen relations with the Tohono O'odham Nation, Mexico and other neighbors of the monument.

Areas of Controversy and Issues

Several issues were identified during initial scoping sessions when the project commenced in 1987-88. These issues included:

- the need to accommodate the steady growth in the number of people coming to this area, while at the same time, protecting resources, especially at Quitobaquito Springs and along State Route 85, that suffer from the increase in use
- the change in the purpose of the monument caused by designation of the Organ Pipe Cactus Wilderness in 1978 and designation of the monument as a Biosphere Reserve as part of the UNESCO Man and the Biosphere program in 1976
- a new understanding and acknowledgement of the status of the Tohono O'odham Nation and their relationship with this land which is sacred to them, as well as new legislation which has been enacted over the last three decades to protect their rights
- elimination of mineral exploration and development and removal of grazing cattle from the area, which has allowed the ecosystem to recover somewhat

While the initial issues remained relevant, the long and arduous planning process for this general management plan added complications and increased the controversy of the plan. The delays experienced have been due to many factors including:

- funding cuts and redirection which were beyond the control of the NPS
- the need to collect, consider, and balance the opinions, needs and desires from extremely diverse groups including the Tohono O'odham Nation, citizens from neighboring communities, United States citizens, and protective groups for both the land and the animals
- the need to consider and comply with the regulations which are necessarily a part of the NPS planning process, as well as legislative restrictions at both the state and federal levels
- the designation of Organ Pipe Cactus NM as a biosphere, which although prestigious, added voices and factors into the decision making process
- the process for analysis of the status of threatened and endangered species

Public and other agency comments on the first two alternatives presented in the *Draft GMP/DCP/EIS* led the NPS to prepare another document titled *Supplement to the Draft GMP/DCP/EIS.* The purpose of the Supplement was to present two additional alternatives in response to comments involving:

- use and management of State Route 85
- the number of alternatives presented
- new ideas about cooperation between the NPS and others, and about development both within and outside monument boundaries
- requests for more involvement by the Tohono O'odham Nation
- costs associated with implementing the alternatives
- mitigation of impacts on natural resources, especially threatened and endangered species.

Choice Among Alternatives

A total of four alternatives in two draft documents were considered. All of the alternatives were developed to meet the legislative intent or purpose of the monument as well as the issues raised during initial scoping meetings and throughout the planning process. Please see the *Summary Comparison of Alternatives and Consequences* tables in the *Summary* section of the *Supplement* for a detailed summary of each of the alternatives and corresponding environmental consequences.

The *Draft GMP/DCP/EIS* contained two alternatives which are summarized below.

The *Existing Conditions/No Action* alternative is based primarily on continuing the course of action as described in approved documents that have been guiding park management and development. The persistent degradation of the only known habitat for the Quitobaquito desert pupfish and the Quitobaquito snail could potentially jeopardize their continued existence. Secondly, improvements proposed by the State of Arizona to State Route 85, could increase traffic levels and speed along this road and could harm the endangered Sonoran pronghorn.

The *Former Preferred Future* alternative calls for increasing regional, tri-national and inter-agency cooperative efforts, preservation treatments for several significant cultural resources, the addition of some new facilities and other improvements in the Twin Peaks, Lukeville, and Quitobaquito Springs areas, trail improvements and additions, seeking redesignation of the monument to Sonoran Desert National Park, and facilitating a cooperative planning effort to find solutions to

reduce the impacts to natural resources and visitor safety from the increasing volumes of traffic travelling at excessive speed along State Route 85. The major consequences of implementing this proposal would be to enhance protection and understanding of the Sonoran Desert, further strengthen relations with local communities, the Tohono O'odham Nation and Mexico, expand the National Wilderness Preservation System by 2,130 acres and help perpetuate the existence of endangered and sensitive species, including the pupfish, snail, and Sonoran pronghorn.

A summary of the two supplemental alternatives follows.

In the *New Ideas Alternative,* no tolls, traffic re-routes or speed limit reductions are proposed for State Route 85. This alternative proposes the NPS work with the State of Arizona to ensure continued commerce while improving resource protection along the portion of the State Route 85 within the Monument. Other actions proposed by the alternative include seeking redesignation to Organ Pipe Cactus National Park; relocating existing and new facilities at or outside monument boundaries; forming partnerships with other agencies, and public or private interests, to share facilities, staff, and costs; realigning the parking and trail network at Quitobaquito as requested by the Tohono O'odham Nation; converting the use of some back-country roads to trails; and visitor use limits and restrictions at the Quitobaquito Springs and Alamo Canyon areas. The major consequence of this alternative is similar to the Former Preferred Future alternative with several exceptions. The National Wilderness Preservation System could be expanded by 3,650 acres, and more opportunities to improve relations with the Tohono O'odham, Mexico and other neighbors would result. Closing Alamo Canyon campground, removing 19.5 miles of roads, and removing almost all facilities from the Twin Peaks area, including housing and the 208-site campground, would be beneficial to wildlife by increasing habitat. However, these effects could be offset by significant increases in development in or around the southern and northern boundary, Lukeville and Why areas.

The *New Proposed Action Alternative,* which is described under the Major Conclusions section above, combines the concepts and actions from the other three alternatives. The major consequence of this alternative is also similar to the Former Preferred Future alternative except the National Wilderness Preservation System could be expanded by 1,509 acres. This alternative constitutes the NPS's preferred alternative and in response to public comments has been re-written within this document in an attempt to make the proposals clear to all concerned. No substantive changes have been made to this alternative as it was presented in the *Supplement to the Draft GMP/DCP/EIS* except for some factual corrections as described in the Errata section of this document. However, reasonable and prudent measures resulting from formal consultation with the U.S. Fish and Wildlife Service on the endangered Sonoran pronghorn, the lesser long-nosed bat, and the recently listed cactus ferruginous pygmy-owl, have been incorporated into the proposed action. One measure resulted in a minor adjustment to the proposed action. To ensure protection of the endangered pygmy-owl, the NPS will prepare a feasibility study before determining if any campsites could be added in the Alamo Canyon Wash campground (the original proposal was to build up to four campsites if conditions allowed). For a complete description of all the measures, please see Appendix A. The measures include:

- to minimize take (i.e. harrass, harm, pursue, hunt, kill, capture or collect) of the lesser long-nosed bat, the NPS will monitor the roost for presence and abundance of bats as well as for detection of unauthorized human disturbance; will maintain existing structures to prevent unauthorized human disturbance; and will not install bat gates until it is clearly appropriate to do so.
- to minimize take of Sonoran pronghorn, the NPS will work with other agencies to conceive, develop and implement actions to reduce the effects of current and future traffic patterns from State Route 85 on this species; will modify fences along Monument borders to better facilitate passage of Sonoran pronghorn through them; will educate motorists about the vulnerability of the species to traffic; and will monitor and restrict human use and access where necessary to minimize potential for disturbance.
- to minimize take of cactus ferruginous pygmy-owls, the NPS will monitor the effects of visitation to the Alamo Canyon Wash area; will prepare a feasibility study to determine the potential effects of human presence in the Alamo Canyon Wash campground on pygmy-owls; will cooperate with the Fish and Wildlife Service to establish closures in areas where pygmy-owls are detected; and will work to elicit public awareness of the vulnerability of the pygmy-owls.

The NPS will also comply with terms and conditions which implement the reasonable and prudent measures summarized above. These terms and conditions are nondiscretionary and are described in the Final Opinion from the Fish and Wildlife Service contained in Appendix A.

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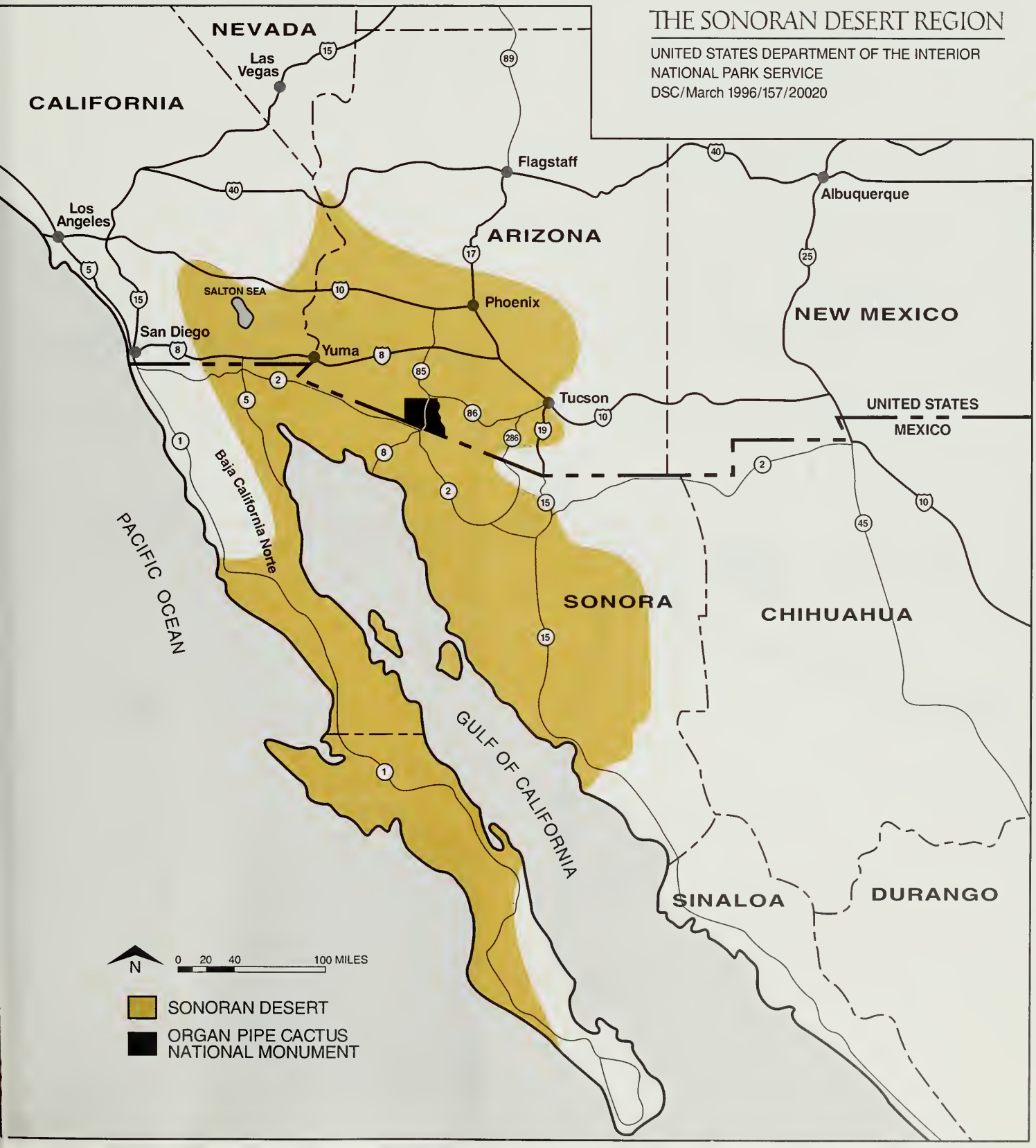
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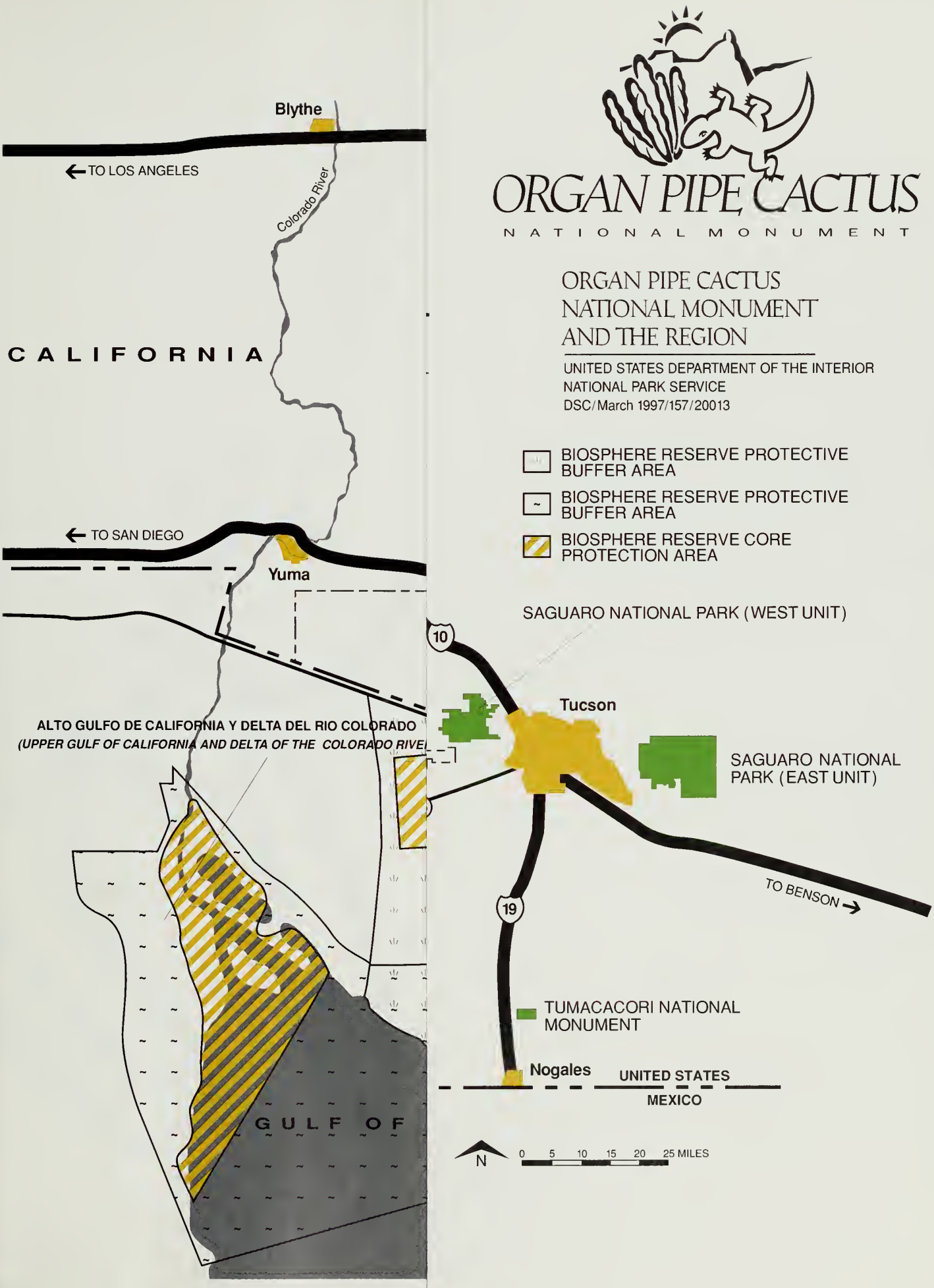
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BIOSPHERE RESERVE PROTECTIVE BUFFER AREA
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Puerto Peñasco

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Introduction and Background

Purpose and Need for the Plan

Because of the special nature of Organ Pipe Cactus National Monument (NM), a comprehensive and sensitive plan for the management of its resources needs to be in place. It is the legal responsibility of the National Park Service (NPS) to propose, develop, make public, and execute such a plan.

The last time that a Master Plan was designed for Organ Pipe Cactus NM was 1964. It is now outdated and inadequate to deal with the variety of issues the monument faces. Also, several significant changes have occurred since then, including:

- designation of the monument as a Biosphere Reserve as part of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Man and the Biosphere program. This plan represents and also serves as the Biosphere Reserve Management Plan.
- a new understanding and acknowledgment of the status of the Tohono O'odham Nation and their relationship with this land which is sacred to them, as well as new legislation which has been enacted over the last three decades to protect Native American rights
- elimination of mineral exploration and development, which has allowed the ecosystem to recover somewhat
- removal of grazing cattle from the area, which also caused the ecosystem to begin to repair itself

This plan was developed to fulfill legal requirements and address the issues and changes affecting the monument. This general management plan (GMP) also attempts to clarify those issues which have recently been under debate, and to present all of the issues in a fair and simple manner. This is being done in response to public comments about the presentation of previous alternative versions of the plan.

History of the Planning Process

The planning process for this GMP has been a long and arduous one. The planning process was begun in 1987-88. The delays experienced have been due to many factors including:

- funding cuts and redirection which were beyond the control of the NPS

- the need to collect, consider, and balance the opinions, needs and desires from extremely diverse groups including the Tohono O'odham Nation, citizens from neighboring communities, United States citizens, and protective groups for both the land and the animals
- the need to consider and comply with the regulations which are necessarily a part of the NPS planning process, as well as legislative restrictions at both the state and federal levels
- the designation of Organ Pipe Cactus NM as a biosphere, which although prestigious, added voices and factors into the decision making process
- the process for analysis of the status of threatened and endangered species

The Point of this Document The issues involved in making the decisions about the land and animals within Organ Pipe Cactus NM are complicated ones. This is a place about which many people feel very strongly, and care about very deeply. Because of the number of individuals and groups who have a voice and a stake in the outcome of this planning process, some of the issues have tended to become enmeshed in rumor and some tempers have run high.

This document attempts to explain these complicated issues in somewhat plainer language than has been previously presented, so that they can be discussed openly and clearly, and so that all parties can understand that everyone who has been involved in this process needs and deserves to be heard, and that there are some issues which have mutually exclusive solutions. In order to make the best decisions, people need to understand the issues from not only their point of view, but also that of their neighbors'. Only in this way can meaningful discussion and a fair outcome result.

What Will NOT Be Done or Affected There has been much speculation in the press, on the editorial pages, and among concerned neighbors about what will be done by the NPS and how those actions will affect the local residents and the local economy. These are reasonable and legitimate

concerns. This section attempts to assure citizens that the NPS is not planning to make these changes at this time. There is always the possibility that future legislation, the outcome of future lawsuits, new studies, or other unforeseen circumstances might affect the decisions made about these issues. At this time, the status of these areas are:

- On State Route 85, there will be no toll road, there will be no speed limit reduction, there will be no road closure.
- There will be no land exchanges with the Tohono O'odham Nation.
- The O'odham's rights and access to the land will not be changed in any way. They will continue to have free access to sacred and significant sites.

General NPS Guidelines

Before the NPS can make any decisions, there are many laws and regulations which govern the actions the NPS can take in the management of park sites and national monuments, and need to be considered completely. Some of the laws which have a specific influence on Organ Pipe Cactus NM are:

- the Organic Act establishing the National Park Service
- the National Environmental Policy Act (NEPA)
- the Federal Water Pollution Control Act
- the Archaeological Resources Protection Act
- the American Indian Religious Freedom Act
- Presidential Proclamation No.2232, which established the monument
- the Wilderness Act
- the Clean Air Act
- Floodplain Management
- the National Historic Preservation Act
- the Clean Water Act
- the Endangered Species Act
- Protection of Wetlands
- The Native American Graves Protection and Repatriation Act
- Federal Actions to Address Environmental Injustice in Minority Populations and Low-Income Populations
- Presidential Proclamation 35 Stat. 2136, which reserved land for the highway
- Executive Order No. 5462, which reserved land in Lukeville for Customs and Immigration

Carrying Capacity Some people have asked for a definition of carrying capacity. Public Law 95-625 now mandates that carrying capacity be a deciding factor in land use decisions. Carrying capacity is defined as a regulation of the type and level of visitor use which can be accommodated while maintaining desired resource and social conditions. It is the NPS's goal with these regulations to provide the best experience to the largest number of people without compromising the wilderness and other values of this special place.

Range of Alternatives Considered, and Consequences Over the course of the decision making process for this plan, a range of actions and their associated consequences were considered. For more information about these actions which were considered, but not included in the GMP, please see the summary tables in the Supplement (May, 1996). The NPS has also listened to many opinions over the time of the planning process, both through letters and other correspondence, and at public meetings. All of these opinions have been considered, although some are mutually exclusive, and it was not possible to implement them all. This document presents the best plan made based on the best available information.

Any action taken in the monument, whether to add opportunities for people to interact with the environment, or to restrict human access to portions of the monument, will have an impact on the special resources. The decisions made by the NPS are not made in a vacuum. Input has been taken over a very long process from an extremely wide variety of sources including the Tohono O'odham Nation, local citizens and neighbors, wildlife and other special interest groups, together with experts within the park system itself. The plan was developed with the best interests of the general public in mind, since the monument is owned by each and every citizen in the United States, and with careful attention to the rights of the O'odham, whose rights to these lands date back farther than human records.

Some changes are inevitable and expected, so that the visitor's experience can be as complete, and yet as safe as possible. In a perfect world, the actions proposed in the GMP for the monument

would be designed and executed efficiently and in the best order. In reality, however, these are times in which the budgetary process is sometimes frustrating. Funding is a complicated issue and projects can only be completed when funding becomes available. The resources will be managed to the best ability of those people responsible, with the help and input of all who have a stake in and wish to participate in the process.

Formation of the Park

Organ Pipe Cactus NM was established in 1937 to preserve almost 132,275 hectares of the Sonoran Desert for the public interest. It is managed by the NPS and is located in south-western Arizona. As a unit of the NPS, Organ Pipe Cactus NM is managed under the mandate of the 1916 Organic Act. This legislation established the NPS, and was enacted to "conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."

National Monument Status Organ Pipe Cactus NM was established, in 1937, by Presidential proclamation, and therefore by definition became a national monument. If it had been created by Congress, it would have had National Park status from the beginning.

All units of the NPS, including national monuments, national parks, and national recreation areas, are governed by the same set of laws, rules, and policies, are funded in the same way by Congress, and are preserved and protected in the same manner.

Park Neighbors

Organ Pipe Cactus NM is located in southern Arizona, on the international border with Mexico. It is bordered on the east by the Tohono O'odham Nation, on the west/northwest by the Cabeza Prieta

National Wildlife Refuge, and to the north by private lands and federal lands managed by the Bureau of Land Management (BLM). A close neighbor is the Barry M. Goldwater Airforce Range.

At the southern edge of the monument is the Lukeville Port of Entry, with a Customs and Immigration Reserve. Within the Mexican border of the Sonoran Desert region, also just south of the monument, is the agriculturally developed Sonoyta Valley and the town of Sonoyta. Located in this area is also El Pinacate Y el Gran Desierto de Altar (The Pinacate and Great Desert), portions of which also have Biosphere status.

Park Purpose

The purpose for the existence of Organ Pipe Cactus NM can be found in the charter of the NPS. This land is being preserved for those who will come after us, so that they might enjoy the scenery, the ecology, the natural and cultural resources available within its boundaries, and experience the solitude, beauty, fragility, and natural wildness of the place.

The management of NPS, including the staff and the general management at the monument, have formulated the following statements to delineate the purpose and objectives behind the monument and its preservation.

- Perpetuate for future generations a representative sample of the natural and cultural resources and processes of the Sonoran Desert and provide for public understanding, use, and enjoyment.
- Preserve for future use and enjoyment the character and values of the designated wilderness within the monument under the Wilderness Act.
- Serve as a natural outdoor laboratory for understanding and managing Sonoran Desert ecosystems.
- Serve as a baseline indicator against which environmental changes can be identified.

Establish a mutually agreeable relationship with the Tohono O'odham Nation to ensure perpetuation of their participation in and with the monument, and to preserve and continue their important relationship with this ecosystem.

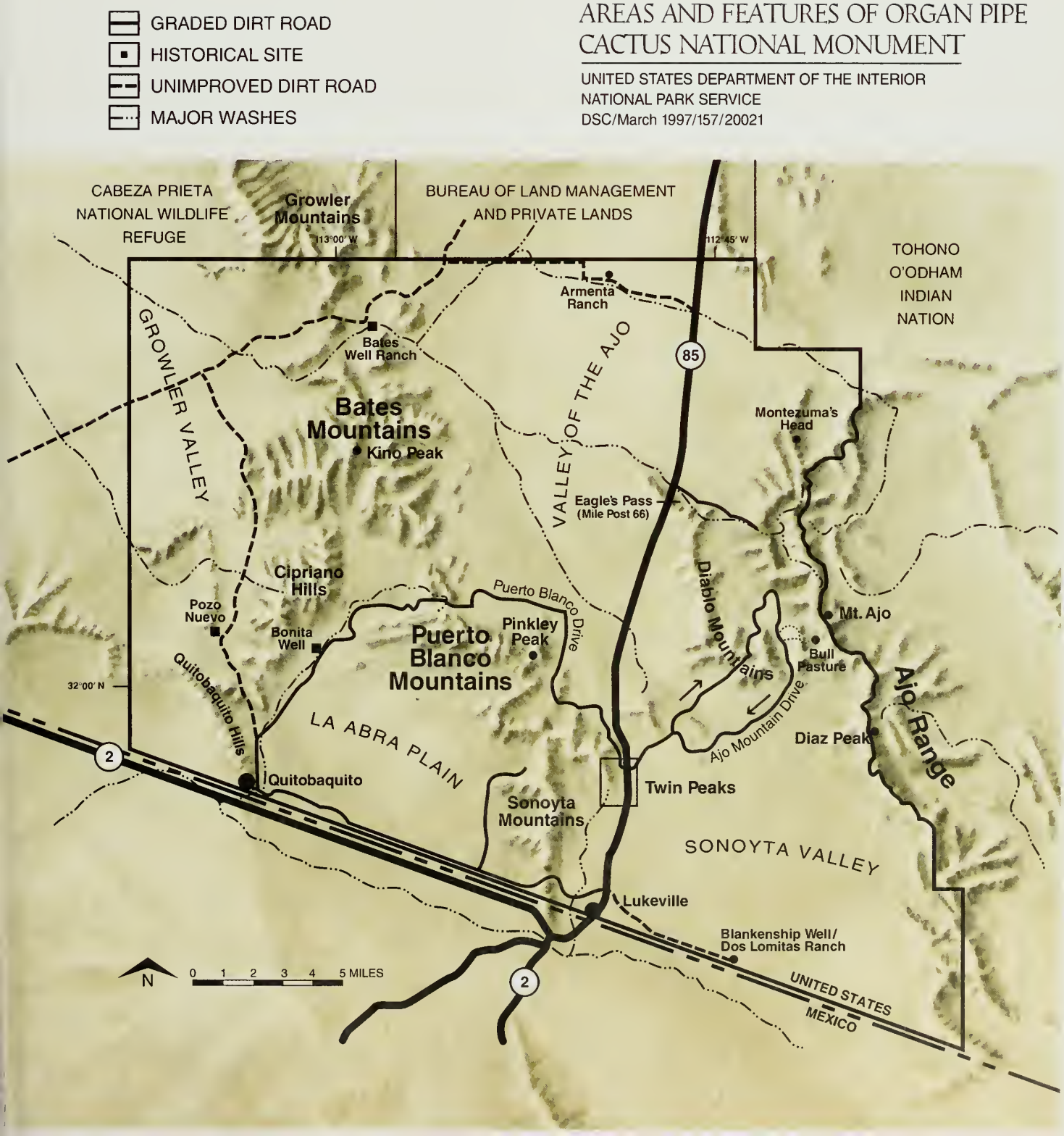
Park Significance

The monument is significant in a number of different ways, and to a number of different groups. It has international significance as a designated Biosphere within the UNESCO framework, it has been a culturally significant area for the O'odham for all of recorded history and some prehistory, and it has been held in trust as a natural and cultural area for the people of the United States for more than half a century.

The following statements describe aspects of the monument that make it significant to the nation and to the world.

- Organ Pipe Cactus NM is a globally significant Sonoran Desert eco-system that has been continuously researched for over 50 years and has been designated a Biosphere Reserve under the International Man and the Biosphere program.

- It is the most biologically diverse protected area in the Sonoran Desert occurring within the United States.
- Organ Pipe Cactus NM has a protected ecosystem providing a habitat for a highly diverse flora and fauna, including threatened, endangered, and sensitive plant and animal species.
- People who visit Organ Pipe Cactus NM experience a protected natural area with wilderness character that provides opportunities for solitude and primitive recreation, enjoying the night time sky, and spiritual replenishment in a Sonoran Desert setting.
- There are expansive vistas of Sonoran desert landscapes including such elements as dramatic mountains and valleys, eroding bajadas or slopes and alluvial fans, and magnificent specimens of columnar cacti.
- Organ Pipe Cactus NM is the site of cultural resources that reflect long, widespread, and diverse occupations by American Indian, Mexican, and Anglo groups.
- It is the site of the intersection of three cultures within the monument that is significant archaeologically, geographically, and internationally.


GRADED DIRT ROAD
HISTORICAL SITE
UNIMPROVED DIRT ROAD
MAJOR WASHES
AREAS AND FEATURES OF ORGAN PIPE CACTUS NATIONAL MONUMENT
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1997/157/20021
CABEZA PRIETA NATIONAL WILDLIFE REFUGE
Growler Mountains
113°00' W
BUREAU OF LAND MANAGEMENT AND PRIVATE LANDS
112°45' W
TOHONO O'ODHAM INDIAN NATION
Armenta Ranch
Bates Well Ranch
GROWLER VALLEY
Bates Mountains
Kino Peak
VALLEY OF THE AJO
85
Montezuma's Head
Eagle's Pass (Mile Post 66)
Cipriano Hills
Pozo Nuevo
Bonita Well
Puerto Blanco Drive
Puerto Blanco Mountains
Pinkley Peak
Diablo Mountains
Mt. Ajo
Bull Pasture
32°00' N
Quitobaquito Hills
LA ABRA PLAIN
Ajo Mountain Drive
Ajo Range
Diaz Peak
2
Quitobaquito
Twin Peaks
Sonoyta Mountains
SONOYTA VALLEY
Lukeville
Blankenship Well/ Dos Lomitas Ranch
N
0 1 2 3 4 5 MILES
UNITED STATES
MEXICO

General Park Description

Organ Pipe Cactus NM is located in the center of the Sonoran Desert, a region which covers approximately 76.4 million acres of land straddling the southern edge of the United States and the northern edge of Mexico. It is a lush ecosystem, with several mountain ranges, valleys, caves, and in certain spots, underground springs which allow for a rich and varied wildlife population, placing it among the world's most biologically diverse deserts. Ninety-five percent of the monument has been designated wilderness, or authorized as potential wilderness, under the Wilderness Act.

Geography

The general geography of the monument itself includes:

- several mountain ranges including the Ajo Range, the Puerto Blanco Mountains, the Bates Mountains, the Diablo Mountains, the Growler Mountains, and the Sonoyta Mountains
- plains and valleys, including Growler Valley, La Abra Plain, Sonoyta Valley, and Valley of the Ajo
- cultural remains from previous or historic uses including Armenta Ranch, Dos Lomitas Ranch, Bonita Well, Bull Pasture, Gachado Well and Line Camp, and the Victoria and Milton mines
- numerous archeological features, including significant Hohokam and O'odham settlements
- sacred sites still in use by the O'odham including I'itoi Mo'o (Montezuma's Head), Quitobaquito Springs, and the monument in general, which is a source of tangible and intangible resources for the people

General Environmental Descriptions

The Sonoran Desert is in many ways a typical desert area: it is an arid environment, with little rainfall, hot, sunny days, and the typical vegetation (creosote bushes, cactus). Water exists in the monument generally in tijanas (depressions in the bedrock where water collects) and in springs (eleven exist within the monument).

Since there is minimal development within the monument, it is an area which possesses a stark

natural beauty, and the opportunities for visitors to experience a solitude and quiet, enjoy the night sky without the light pollution prevalent in populated areas, and see a wilderness area which has not been developed away from its primitive, natural state.

Vegetation There are five vegetation habitat types within the monument: mixed Sonoran Desertscrub, creosote-bursage, evergreen woodland/mesic evergreen scrubland, marsh and open water, and riparian communities. A study done recently shows that at most, 11% of the vegetation species which exist in the monument are non-native. This is evidence of a very healthy habitat.

Allowing visitors to view these plants in their native habitat, coupled with an education program could instill a deep appreciation for the existing environment.

Biosphere Designation In 1976, The United Nations Educational, Scientific and Cultural Organization (UNESCO) designated the area in which Organ Pipe Cactus NM exists a biosphere reserve under the direction of the Man and the Biosphere (MAB) program. This program was started to designate protected examples of major ecosystems which provide a baseline against which man's impact on the environment can be measured.

The biosphere designation applies to not only the area of the monument, but other portions of the Sonoran Desert region in Mexico as well. This implies that any decisions about the monument need to consider the larger context of the world's view of this unique and valuable area.

This designation also puts the monument directly in an international context, as the Sonoran Desert crosses international border lines (with Mexico).

Wilderness Designation "Wilderness" as defined in part by the Wilderness Act of 1964, is "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." Also the land "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable".

Ninety-five percent of Organ Pipe Cactus NM is designated wilderness or authorized by Congress as potential wilderness. These designations require the NPS to adhere to principles that preserve these wilderness resources and values. The NPS takes this mandate very seriously, and a number of the decisions which have been made reflect that.

Wildlife Management The management of the wildlife within the monument and their habitats is a complicated and highly charged subject. There are many laws governing the protection of these animals and the disposition of their habitat. These are balanced against people's rights and needs to visit and to use this beautiful area in which these animals reside. Although there might be impact from humans onto this place, it also gives visitors an opportunity to appreciate the beauty and the exceptional status of this land and its animals.

Wildlife Within the Park. The following is a general categorization of wildlife which exists within the monument, for a more complete listing and discussion, see the section on wildlife in the Draft GMP/DCP/EIS document published in early summer 1995.

- Mammals: There are 55 mammalian species within the monument, including 19 rodents, 13 carnivores, 14 bats, 5 ungulates, 3 rabbits and hares, and 1 insectivore. There are 9 more species which might exist in the monument, most of which are bats.

- Birds: There are 277 reported species of birds within the monument. Of these, 58 are probable breeders, and include 36 permanent residents, and 22 summer residents. The remaining species are either spring and fall migrants (60 species), vagrants (50 species), or winter visitors.

- Herpetofauna: There are 25 snake species, 16 lizards, 5 toads, and 2 turtles.
- Fish: There is only one fish extant in the monument, the Quitobaquito desert pupfish, which is a native of the springs of the same name.
- Invertebrates: More than 1,000 taxa have been recorded within the monument, including ants, butterflies, and snails.

Biological Assessment. A biological assessment was prepared by the NPS to assess the impacts of the GMP for Organ Pipe Cactus NM on endangered species. Please see Appendix A of this document. Additionally, a more specific analysis will be conducted on a project-by-project basis. The NPS is, of course, bound by the Endangered Species Act, which prohibits agencies from jeopardizing the continued existence of threatened and endangered species. Federal law defines endangered species as "a species that is in danger of extinction throughout all or a significant portion of its range." Those species categorized as threatened are "a species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range." For more information on this topic, please see Appendix D in the Draft GMP/DCP/EIS .

The NPS has determined that actions proposed in this GMP would have no effect on the American peregrine falcon or brown pelican, both of which are endangered and known to occur within the monument. The brown pelican is a very rare visitor with only four reported sightings, the last of which occurred in July, 1972 at Quitobaquito Pond. The peregrine falcon is a rare transient with no confirmed breeding accounts. None of the actions proposed in the GMP would result in long-term effects on habitat or prey for either species.

The U.S. Fish and Wildlife Service (USFWS) is the responsible authority in the analysis and determination of the status of these animals, and is the final authority for decisions about the effect of

the GMP on specific species. If any of these changes were found to adversely affect species within the monument, steps would be taken to reduce visitor contact with the affected species.

Special Status Species. The threatened or endangered species which are known to occur within the monument are listed below.

- Lesser long-nosed bat: The lesser long-nosed bat is a seasonal resident in the monument, occurring between April and September. Increasing visitor use in the Alamo Canyon could possibly lead to human disturbance at the nearby maternity roost. Although, visitation to the monument and use of this campground is relatively low during the time of year that the bats are roosting, and the remote location and warning signs and fences which are on the adit (cave entrance) would continue to discourage hikers from visiting the roost. Education about the bats and the importance of their home would also ensure little disturbance.
- Sonoran pronghorn: The largest continuing impact on this animal is the road conditions on State Route 85. Little is known about how the road is affecting the Sonoran pronghorn and its habitat. The NPS will continue to work with others on Sonoran pronghorn recovery programs, including a monitoring program, to preserve and recover this species.
- Quitobaquito desert pupfish: This fish exists only at Quitobaquito Springs, within the boundaries of the monument. Proposals made by the NPS are not expected to adversely affect the habitat of this animal. One remaining concern is the introduction of non-native fish into the springs, but with the proposed increase in patrol time, this problem should be mitigated.
- Cactus Ferruginous Pygmy-Owl: The cactus ferruginous pygmy-owl is an uncommon, but permanent resident of the monument. Part of its habitat exists in the Alamo Canyon Wash campground. To ensure that there are no adverse effects, the NPS would continue to survey the campground and Alamo Canyon for the presence of the cactus ferruginous pygmy-owl. If any were found to be present, the camping and other uses at this site would be reconsidered.

Air Quality and Noise The monument is, for the most part, a quiet and peaceful refuge for humans and animals. There is some air and noise pollution generated by flyovers from airplanes from a close neighbor, the Barry M. Goldwater Airforce Range. The number of flights has been reduced over the past decade, but there continue to be some flyovers.

There would still be air pollution, however, generated by sources outside the monument. The United States, however, has little authority to regulate these sources, so the pollution would be likely to remain unchanged.

Water Quality Tijanas (depressions in bedrock) and springs account for most of the water sources within the monument. There are 11 springs in the monument, eight of which are located at Quitobaquito, by far the largest source of water. The pond and dam at Quitobaquito were constructed in 1860, and the resulting body of water is one of the largest oases in the Sonoran Desert. The site is also sacred to the O'odham, who have used the water from this spring for all of their residence in the area.

There is the problem of groundwater pumping into the Sonoyta Valley, due to urban and agricultural needs. Although a moratorium on new well drilling has been imposed, the aquifer continues to be lowered by the current rate of use. Studies and negotiations with the monument's Mexican neighbors continue, to ensure a stabilization of the situation, and hopefully, an improvement.

Visitor Use and Enjoyment

Peace, beauty, open space, and the opportunity for solitude are often the reasons given for a visit to Organ Pipe Cactus NM. In this increasingly crowded world, places like the monument are more critical to people, and meet needs that are not met in their everyday world.

The night time sky is visible, because of the marked lack of light pollution within the monument. This is a fact mentioned by many visitors. The NPS does not wish to make any changes to the monument which would adversely affect these intangible, yet important qualities. The staff would like to

work with citizens, including the Tohono O'odham Nation, and keep appropriate state, federal, and international agencies to preserve as much of the current character of the monument as is possible.

Camping Visitors to the monument have indicated a desire for more opportunities for primitive camping (camping without use of a resident vehicle and/or generator), similar to that in Alamo Canyon Wash. There are ample drive-in camping opportunities within the monument, as well as a variety of other camping facilities in Lukeville and the surrounding region.

Interpretation Approximately ninety-five percent of the visitors to Organ Pipe Cactus NM use the visitor center. Because of the increase in the number of visitors in the past few years, conditions at the visitor center are often crowded, which lessens the quality of the visitor's experience. Visitors have also remarked on the lack of interpretive materials on the scenic drives offered in the monument, and requested more picnic facilities along these same roads.

Hiking/Walking The trails which exist with the monument are used by the majority of visitors. Trails provide opportunities for recreation, exercise, and for access to natural history and cultural history sites. Many visitors have requested additional trails of various lengths and difficulty. Because of the lack of trails, many miles of social trails have appeared in popularly used areas.

Scenic Drives A primary monument experience is driving one or both of the scenic unpaved one-way loop drives: the 21-mile Ajo Mountain Drive, and the 53-mile Puerto Blanco Drive. Other primitive roads exist in the monument, but are less frequently traveled, since they require a four-wheel drive vehicle. Most respondents to the surveys did not wish to see the roads improved. They did, however, request more turnouts and additional picnic spots.

State Route 85 Approximately 22 miles of State Route 85 lie within the monument. The Arizona Department of Transportation (ADOT) maintains the road and shoulders under an agreement that applies to an area extending 33 feet from each side of the road centerline. ADOT also maintains the condition of the highway. Under a separate agreement, the State of Arizona Department of Public Safety and the NPS share responsibility for patrolling the road and enforcing the posted speed limit of 55 mph within the monument.

The increasing amount of commercial and other vehicle traffic traveling on State Route 85 is one of the most significant issues affecting visitor experience and the wildlife of the monument. The majority of this traffic is passing through the monument; many of these travelers never realize that they have entered a unit of the National Park System.

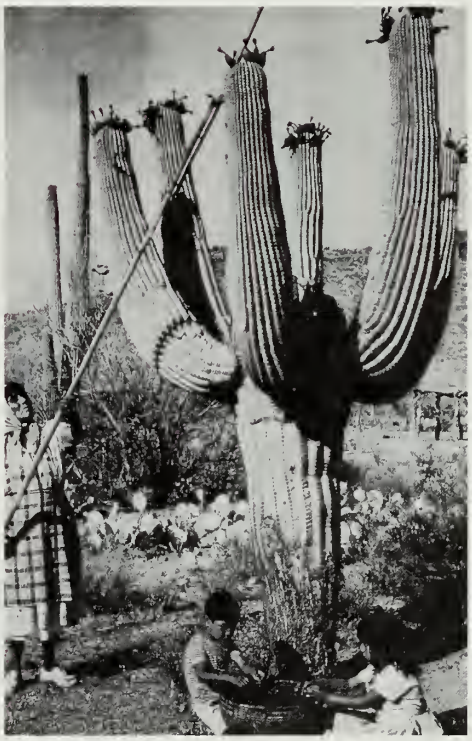
Quitobaquito Quitobaquito is situated approximately 50 meters to the north of the international boundary with Mexico. Quitobaquito is a spring-fed oasis in the Sonoran Desert. It is an area of lush riparian growth and is one of the few authentic desert oases on the North American continent. Natural springs flow into a manmade channel and pond, which are habitat for an endangered species of desert pupfish.

The Quitobaquito area is a popular destination for visitors to the monument, and there are many "social trails" in existence around the area. Social trails develop from common use, without being designated or marked. Presently, there is uncontrolled use of the trails in this area.

Alamo Canyon Campground Located in Alamo Canyon Wash is a small, primitive campground, consisting of four walk-in sites and one composting toilet, and a turn-around area also used for parking by visitors using the area for the day. It is located in an area which is rich in natural and cultural resources, and is a popular destination for visitors to the monument. These campsites are almost

constantly in use during the monument's busy season, as the area provides an opportunity for solitude and quiet, in a relatively accessible venue. Day-use visitation has been increasing, and it is common to have many vehicles haphazardly parked in the area.

Cultural Resources Management The cultural history of the monument is a varied and long one. Evidence indicates that there has been human occupation and activity in the monument dating back 12,000 years. There still exist sites within the monument which are sacred to the O'odham, including Quitobaquito Springs and I'itoi Mo'o (Montezuma's Head). Even into the present day, the O'odham continue to visit the monument to collect sacred water from the Springs, to gather medicinal plants, and to harvest the fruit of the organ pipe and saguaro cactus.



Quitobaquito Springs has been an important source of water for all of recorded history as well. There is evidence that Spanish explorers stopped at this site, and it was certainly used as a source of water for those passing to and from what is now Mexico and the United States.

There was also mining within the monument with associated commerce. Copper, lead, gold and silver were taken from the land within the monument, and some historic sites remain.

For a few families, ranching within the monument provided a livelihood. Cattle grazing within the monument lasted until 1976, and some of the historic fabric from that time still exists.

Because of its importance, treatment is needed to preserve some of the historic fabric. The monument's recent designation as a biosphere also underscores the importance of maintaining the rich history of the Tohono O'odham and Hia-Ced O'odham and their ability to adapt to and live with this arid environment. In addition to treatment, there are many educational possibilities, including literature, guided tours, pullouts, and other forms of interpretation which would preserve and perpetuate the lessons learned here over the many hundreds of years of occupation.

General Summary of the Plan

Vision and Goals

The NPS is dedicated to preserve and protect this valuable natural resource that is the Organ Pipe Cactus NM, including all of the diverse elements: animal, plant, bird, culture, what is sacred and what is yet to be discovered.

The following goals and desired futures were developed with input from citizens, consultations with the Tohono O'odham Nation, and the NPS staff experience and mandates. They provide the basis for the plan as well as the direction for future management decisions which will be ongoing.

Goals for the Land

The goal of the NPS is to preserve as much of the natural and wild character of this piece of the Sonoran Desert in the face of increased annual visitation, potential impacts on the land due to the passage of the North American Free Trade Agreement (NAFTA), and the sometimes conflicting needs of the neighbors of Organ Pipe Cactus NM. This will result from a careful preservation of the monument's natural as well as cultural resources, which are inextricably linked, to ensure the highest quality visitor experience possible.

Goals for the Animal Inhabitants

The goal of the NPS for the animal inhabitants of Organ Pipe Cactus NM is to preserve the natural habitat for these important occupants of this land, and to protect their rights to live, reproduce, and travel in what is as much their home as it is ours. To this end, the NPS will examine its decisions in the light of the needs of these precious native species in order to minimize the impacts of visitors on them.

Man and the Biosphere Program

- The NPS would participate in facilitating a voluntary and cooperative effort with neighboring land managers to preserve, study, and wisely use the natural and cultural resources within an expanded Sonoran Desert Biosphere Region.

- The NPS would work toward balanced, zoned management of natural and cultural resources across the international and other borders through voluntary cooperation and sharing of knowledge, expertise, and personnel among Sonoran Desert land managers.

- The visitor would have a wide range of opportunities for self-directed experiences related to natural and cultural resources. The Sonoran Desert would in effect constitute an expanded biosphere reserve, and international information that would be global in perspective and emphasize human/environmental concepts and concerns.

Natural Resources

- Establish and maintain baseline data on the condition of Sonoran Desert ecosystems.

- Achieve sufficient understanding of Sonoran Desert ecosystems for effective protection.

- Restore and preserve intact a significant and representative portion of Sonoran Desert ecosystems.

- Increase the land area that qualifies for wilderness.

Cultural Resources

- Recognize the significance of the full continuum of cultural resources in the context of natural resources.

- Achieve sufficient understanding of the monument's cultural resources for effective protection.

Visitor Experience

- Increase public understanding and appreciation of arid environments.

- Develop recreational opportunities that allow visitors to experience the monument without impairing its natural, cultural, or scenic values.

- Preserve the harmonious natural setting that allows opportunities for solitude and spiritual refreshment.

- Create secure, crime-free conditions for visitors and employees.

Cooperative Management

- Achieve cooperation in regional land use and management among surrounding monument neighbors that supports protection of monument values.

- Implement a coordinated Man and the Biosphere program with surrounding land managers and agencies.

Facility Resources

- Provide adequate facility resources to make the monument a workable and safe place for all visitors and NPS personnel.

- Provide better resources for ongoing scientific work within monument boundaries.

Regional Partnering

- Work with state and other local agencies to determine the best use of available resources, including roads, power lines, and water.

- Enter into an agreement with the Tohono O'odham Nation, in a government-to-government relationship.

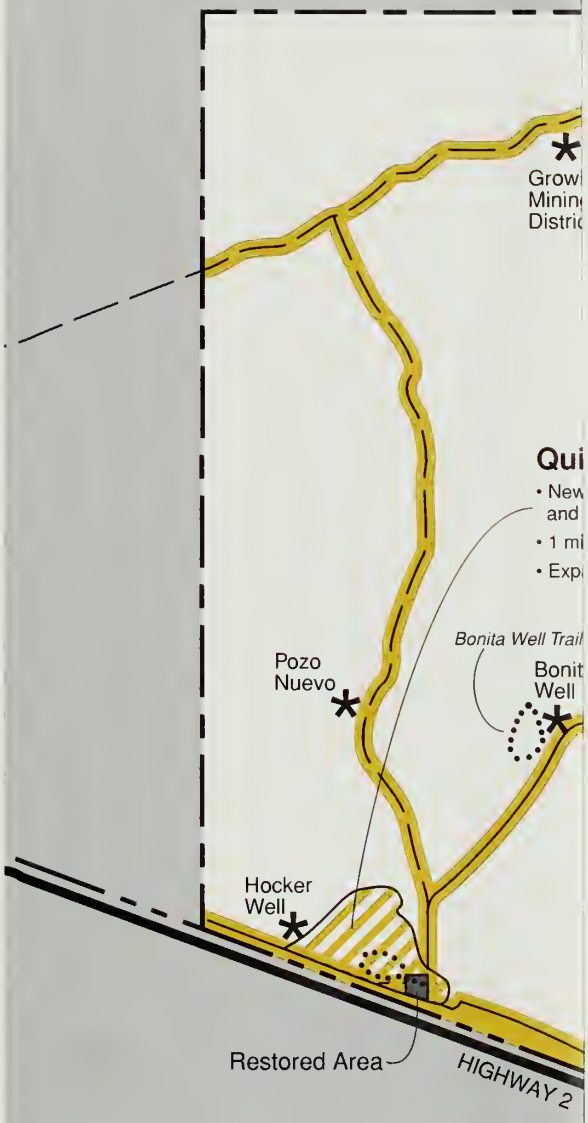
- Explore mitigation strategies for water conservation and other water use issues with all neighbors, including the O'odham, the NPS, and the citizens of the Sonoyta Valley.

- Explore relationships with surrounding businesses, citizens, and others to find partnerships which will benefit all parties and increase communication and common ground.

SONORAN DESERT
NATIONAL PARK

NEW PROPOSED ACTION ALTERNATIVE

SONORAN DESERT NATIONAL PARK
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1996/157/20014



Twin Peaks

- Construct an addition onto existing Visitor/ facility and convert into science, education management center with adjoining interpre
- Maintenance Facility expansion to include Operations and Fire Station, and Helicopte
- 20 new primitive campsites near existing g camping area
- Convert offices and dorms back to employ

MANAGEMENT ZONES

- Non-Wilderness Zone-Development Area
- Non-Wilderness Zone-State Route 85 Corridor
- Non-Wilderness Zone-Travel Corridor
- Wilderness Zone
- Wilderness Zone-Potential Wilderness Additions
- Wilderness Zone-Quitobaquito Management Area
- Cultural Resources Overlay Zone

GENERAL LEGEND

- Existing Trails
- Proposed Maintained Trails
- Paved Roads
- Graded Dirt Road
- Unimproved Dirt Road

SONORAN DESERT NATIONAL PARK

NEW PROPOSED ACTION ALTERNATIVE

SONORAN DESERT NATIONAL PARK
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1996/157/20014

Why

Establish partnerships with other federal agencies for Regional Information/Orientation Center in the Why area (exact location to be determined)

Northern Information Portal with exhibits, parking, shade, and Sonoran Desert Trail

State held parcel

Growler Mining District

Bates Well Ranch

85

Relocate powerline from this area to the State Route 85 Corridor

I'itoi Mo'o (Montezuma's Head)

Alamo Canyon Wash Campground

- Develop feasibility study for possible addition of campsites, if any
- Delineate day use parking area
- Extend Alamo Canyon Trail

Quitobaquito Management Area

- New trailhead with parking, interpretive information, and composting toilet along Puerto Blanco Drive
- 1 mile round-trip trail accessible to visitors with disabilities
- Expand size of Management Area

Pozo Nuevo

Bonita Well Trail

Bonita Well

Puerto Blanco Drive

Puerto Blanco Loop Trail

Pulloff, parking, Grinding Holes Trail

Pulloff, parking, Desert Garden Loop Trail

Bull Pasture

Ajo Mountain Drive

Diaz Spire Loop Route

Hocker Well

Milton Mine

Senita Basin Loop Trail

Twin Peaks Trail

Work with Tohono O'odham Nation to protect and manage lands along the divide

Restored Area

HIGHWAY 2

Victoria Mine

Southern Information Portal with exhibits, parking, and shade

Twin Peaks

- Construct an addition onto existing Visitor/Administration facility and convert into science, education, and resources management center with adjoining interpretive center for visitors
- Maintenance Facility expansion to include Ranger Operations and Fire Station, and Helicopter Pad
- 20 new primitive campsites near existing group camping area
- Convert offices and dorms back to employee housing

Gachado Line Camp

State held parcel

Dos Lomitas Ranch

To Puerto Peñasco

Sonoyta

2

To Caborca

UNITED STATES

MEXICO

Lukeville

- Establish partnership to provide apartments (total 10 bedrooms) for seasonals and researchers
- Establish partnership with other federal agencies to share office and work space for administrative staff
- Support ISOA in establishing Tri-Cultural, Tri-National facility
- Help establish small community center for both area and monument residents

N 0 1 3 5 10 MILES

MANAGEMENT ZONES

- Non-Wilderness Zone-Development Area
- Non-Wilderness Zone-State Route 85 Corrid
- Non-Wilderness Zone-Travel Corridor
- Wilderness Zone
- Wilderness Zone-Potential Wilderness Additions
- Wilderness Zone-Quitobaquito Management Area
- Cultural Resources Overlay Zone

GENERAL LEGEND

- Existing Trails
- Proposed Maintained Trails
- Paved Roads
- Graded Dirt Road
- Unimproved Dirt Road

SONORAN DESERT
NATIONAL PARK

NEW PROPOSED ACTION ALTERNATIVE

TWIN PEAKS DEVELOPMENT CONCEPT PLAN

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1996/157/20016

- EXISTING BUILDINGS AND FACILITIES
- NEW BUILDINGS AND STRUCTURES
- NEW ROADS, PAVED AREAS, AND OTHER FACILITIES
- REMOVE ROADS: RESTORE TO NATURAL CONDITIONS
- --- EXISTING TRAIL

SONORAN DESERT
NATIONAL PARK

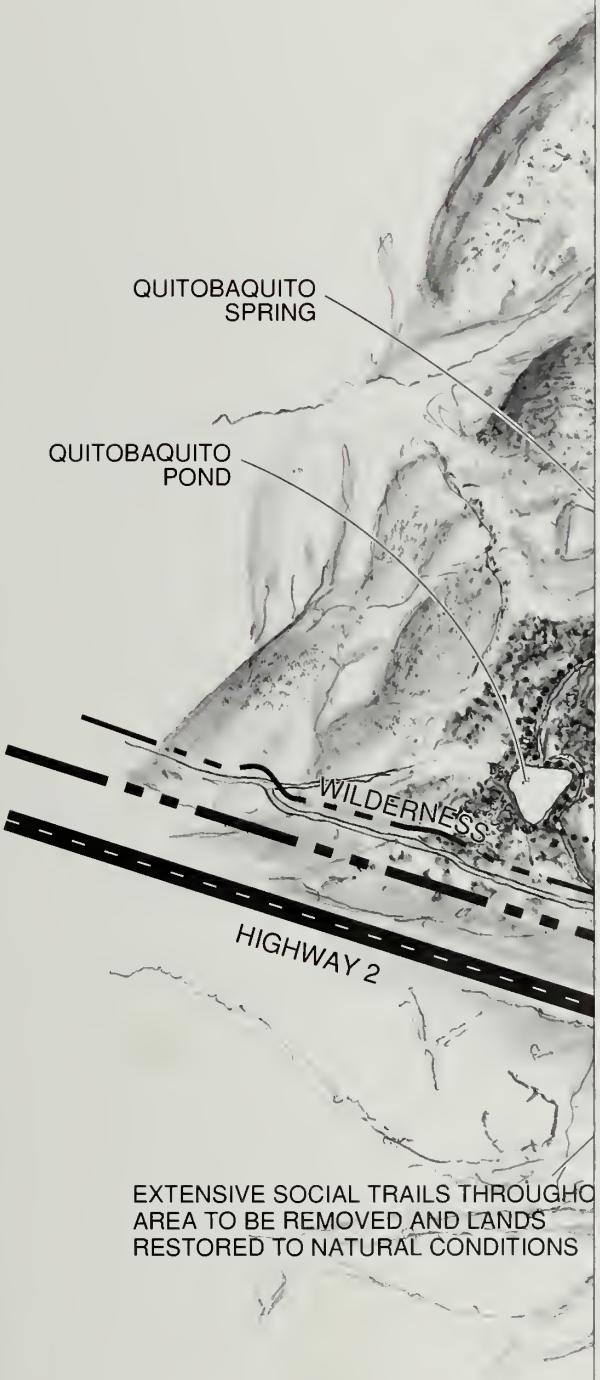
NEW PROPOSED ACTION ALTERNATIVE

TWIN PEAKS DEVELOPMENT CONCEPT PLAN
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1996/157/20016

- EXISTING BUILDINGS AND FACILITIES
- NEW BUILDINGS AND STRUCTURES
- NEW ROADS, PAVED AREAS, AND OTHER FACILITIES
- REMOVE ROADS: RESTORE TO NATURAL CONDITIONS
- --- EXISTING TRAIL

EASY ACCESS TRAIL

• APPROXIMATELY 1 MILE ROUND TRIP IMPROVED TRAIL, ACCESSIBLE TO VISITORS WITH DISABILITIES



ORGAN PIPE CACTUS
NATIONAL PARK

NEW PROPOSED ACTION ALTERNATIVE

QUITOBAQUITO DCP

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1996/157/20018

- New Facilities
- New Dirt Road
- Potential Wilderness Additions
- • • • Proposed Maintained Trails

ORGAN PIPE CACTUS
NATIONAL PARK

NEW PROPOSED ACTION ALTERNATIVE

QUITOBAQUITO DCP
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
DSC/March 1996/157/20018

EASY ACCESS TRAIL
- APPROXIMATELY 1 MILE ROUND TRIP IMPROVED TRAIL, ACCESSIBLE TO VISITORS WITH DISABILITIES

TRAILHEAD
- PARKING
- ORIENTATION SIGN
- PAMPHLET DISPENSER
- COMPOSTING TOILET

OUITOBAQUITO SPRING

OUITOBAQUITO POND

WILDERNESS

PUERTO BLANCO DRIVE

WILDERNESS

ADD NEW ROAD SEGMENT

BOUNDARY ROAD

CONNECT BORDER PATROL ROAD WITHIN EXISTING NON-WILDERNESS CORRIDOR (EXACT LOCATION TO BE DETERMINED)

WILDERNESS

HIGHWAY 2

EXTENSIVE SOCIAL TRAILS THROUGHOUT AREA TO BE REMOVED AND LANDS RESTORED TO NATURAL CONDITIONS

CONVERT ROAD INTO A TRAIL

UNITED STATES
MEXICO

N 0 200 400 600 FEET

- New Facilities
- New Dirt Road
- Potential Wilderness Additions
- Proposed Maintained Trails

Overview of the Proposed Action

Development of the General Management Plan (GMP), the Development Concept Plans (DCP), and the Environmental Impact Statement (EIS), complete with public comments and responses, were written to guide management and development of the monument over the next 10-15 years. It also summarizes the proposed action as described in the Supplement.

This process has been a long and arduous one, and continues to be. There are many voices to be heard, many opinions to consider, and many factors to weigh in each decision that is made about the monument, no matter how seemingly small or inconsequential. The NPS staff has made and continues to make an effort to assure that everyone's opinion is heard, and that all factors are considered.

To this end, also, the NPS has to represent not only its own interests and input into the monument, but also those of the general public. All places in the NPS domain are owned by each and every citizen of the United States, and their views and needs must be considered as well as those of local interests. Every effort is made to hear and respond to opinion and interests which are varied and important in their own right.

National and International groups also have a stake in the monument and the outcome of the planning process. Environmental protection groups, scientists and other interested parties have commented, and will continue to comment on the outcome of this process. The Biosphere Reserve designation is consistent with the NPS's mandate to preserve the land and its resources. This designation is an additional opportunity to inform visitors about the program in general, and about the monument's important role in this precious network. Since this plan has become so comprehensive, it will serve as the Biosphere Reserve plan, also.

Redesignation

The NPS would support legislation to change the name of this beautiful land from Organ Pipe Cactus National Monument to Sonoran Desert National Park. This would not change the NPS's authority or responsibilities in this area in any way, or alter funding or direction. The basic directive of the NPS is to "conserve the scenery and the natural and historic objects and wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for future generations," and would continue here.

It is partly for reasons of keeping the monument intact that the NPS proposes redesignation legislation. Most national monuments protect a single, unique feature. Organ Pipe Cactus NM is a diverse area, and its designation would be more appropriate with the name Sonoran Desert National Park. Also, in light of recent budget situations, redesignation would also be prudent for preservation of the monument. When a list of possible units of the NPS to be closed was released recently, there were no national parks on the list. There were, however, national monuments, Organ Pipe Cactus National Monument among them.

- For all these reasons, National Park status will be sought.

Role in the Biosphere

Because of its designation by UNESCO as a Biosphere Reserve, Organ Pipe Cactus NM has international significance. Biosphere Reserves are part of an international network of protected examples of major ecosystems. In addition to preserving the systems for future generations, they are also used as a baseline for human impacts on the environment. Please note that this plan also serves as the biosphere reserve plan.

- The NPS will continue to participate in Biosphere-related activities, and will do our part to further Biosphere Reserves, both nationally and internationally.

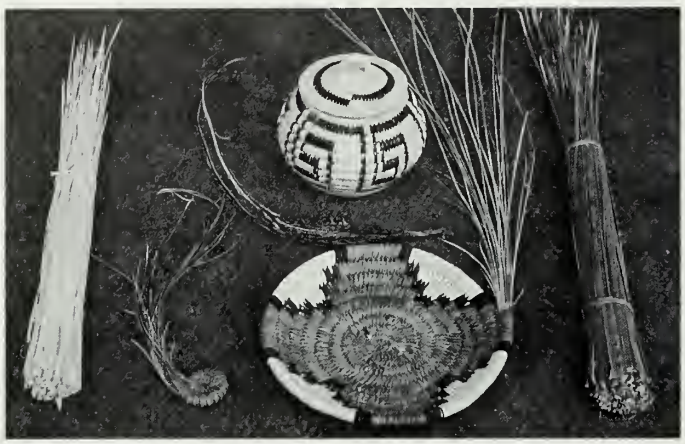
Land Use and Management

The monument would be divided into different "zones" which would dictate management, use patterns and carrying capacities. These would include:

- *Wilderness Zones:* land in this zone would be preserved using wilderness values in accordance with the regulations in the Wilderness Act. This area includes two subzones: the Potential Wilderness Subzone (which includes 3,410 acres of land eligible for wilderness designation), and the Quitobaquito Management Area Subzone. The area of wilderness in the monument would be added to in two ways: the parking lot would be re-located to the Puerto Blanco road, allowing the Quitobaquito road to be converted to a handicap-accessible trail. If recommended by Congress, this action would also add 23 acres to designated Wilderness status. In addition, 1280 acres of state held land would be designated wilderness and managed by the NPS as such.
- *Non-Wilderness Zones:* land in this zone would provide for uses involving large concentrations of people or vehicles. Included in this zone are three subzones: State Route 85 Corridor Sub-zone, the Travel Corridor Subzone, which includes all other roads, and the Development Area Subzone, which applies to concentrations of visitor and management facilities. Travel corridors are existing roads traveled by cars which are used to move around in or through the monument. Additional development in the monument would be confined to already-developed areas, to lessen potential impacts on the land.
- *Cultural Resources Overlay Zone:* This land includes areas which have historical fabric or other cultural resources existing on it. Land in this zone would be preserved, protected, and interpreted based on the cultural resources existing there.

Natural and Cultural Resources Management

This part of the plan would serve to maintain and to protect existing natural and cultural resources in the monument. Some of the issues which have been identified in this area include the need for a comprehensive resources management program, mitigation strategies and species recovery plans, and increased efforts to preserve air, water, cultural, and other resources. This would be accomplished through an inter-agency effort which would include the NPS, USFWS, BLM, and state management agencies.



The history of humans in what is now the monument has been a long and varied one from prehistoric times to the present, dominated by the presence of the Tohono O'odham, and especially the Hia-Ced O'odham. Human occupation on this land is known for at least the past 12,000 years. The ethnohistory of these people, and of the Hia-Ced O'odham, who have survived for many years in this arid environment, have much to teach us about desert lifeways, about living with the land.

The ranching and mining history of this area are also a valuable resource. Several of the properties are currently listed or formally declared eligible for listing on the National Register of Historic Places.

The educational possibilities here are also varied and interesting. The existing historical sites could be stabilized or repaired, and used as historical reference points. Teaching could be done through literature, demonstrations, and other guided materials.

The following provides more details about specific areas:

Resources Management Facilities A 5,000 square feet Science, Education, and Resources Management Center would be located in Twin Peaks by converting the existing visitor/administration

facility. A greenhouse and plant nursery would be constructed nearby. These facilities would serve to provide work space for the monument personnel and the many visiting scientists who would study Sonoran Desert ecosystems and their important place in the global ecology. It would also be used for visitor education about how to minimize human impact on this fragile ecosystem could be conveyed. The existing offices would be converted back to employee homes.

Cultural Resources Historic properties within the boundaries of Organ Pipe Cactus NM would be stabilized, and, where appropriate, would be listed on the National Register of Historic Places. Preservation and use treatments would be applied for the properties listed. New developments would be surveyed for archeological resources prior to construction and potential impacts mitigated.

The monument contains not only resources which are historic, but also archaeologic and ethnographic. The Natural and Cultural Resources Management Plan calls for many actions that would significantly increase the knowledge and understanding of known (and currently unknown) cultural resources and properties. It is important to continue to evaluate these archeological, ethnographic, and historic resources, including possible traditional cultural properties, for potential eligibility for listing on the National Register of Historic Places.

Native American Consultation A government-to-government agreement about the management of the lands, particularly those which are sacred to the Tohono O'odham would be sought. Most often, the US government would be represented by the Superintendent or other representative from the NPS. A consultation arrangement would be implemented to ensure ongoing adequate and accurate communication in both directions. The NPS would attempt to ensure greater involvement of the O'odham in interpretive activities, including cultural history. Care would be taken to ensure sensitivity to this land as the homeland of the Tohono O'odham and the Hia-Ced O'odham, a place that is sacred to them.

Special Status Species There are several species which appear on the federal threatened and endangered species list. The monument staff has current monitoring programs for the known threatened and endangered species within the monument. These will continue at their present level, and possibly increase in scope with the addition of appropriate staff.

Some of the species on the federal threatened and endangered species list will not be affected by any of the proposed actions in the GMP. The NPS has determined that actions proposed in this GMP would have no effect on the American peregrine falcon or brown pelican, both of which are endangered and known to occur within the monument.

Because of the number and importance of the species which might be affected by the GMP, the NPS formally consulted with the Fish and Wildlife Service to determine the possible affects of these proposed actions. The analysis is recorded in the Biological Assessment and the resulting determination in the Final Opinion, both which appear in Appendix A of this document.

A summary of the measures the NPS will employ to ensure protection of each endangered animal follows:

- *Sonoran Pronghorn:* Observations of Sonoran pronghorn in the Monument suggest that traffic along State Route 85 acts as a barrier to movement and fragments the species habitat. The NPS will work with the Arizona Department of Transportation to establish a program to explore measures to better understand and subsequently reduct the impacts of traffic speed and volume along State Route 85; will continue to serve as a member of the Sonoran Pronghorn Core Working Group and implement the Recovery Plan; will modify fences along Monument borders to better facilitate passage of Sonoran pronghorn through them; will educate motorists about the vulnerability of the species to traffic; and will monitor and restrict human use and

access where necessary to minimize potential for disturbance.

- *Lesser long-nosed bat:* This animal's range includes the Alamo Wash campground. The NPS will monitor the roost for presence and abundance of bats as well as for detection of unauthorized human disturbance; will maintain existing structures to prevent unauthorized human disturbance; and will not install bat gates until it is clearly appropriate to do so.
- *Quitobaquito Desert Pupfish:* Proposals made by the NPS would not adversely harm the habitat of this animal. What is proposed is a well-defined trail system at Quitobaquito, which would reduce visitor trampling and improve habitat for the pupfish.
- *Cactus Ferruginous Pygmy-Owl:* This animal's range includes Alamo Canyon Wash. Previously, the proposed action called for development of up to four campsites in this area. Since the existence of this species is so tenuous, the NPS will first research the effect of human presence and development before proposing to build additional campsites, if any; will cooperate with the U.S. Fish and Wildlife Service to establish closures in areas where pygmy-owls are detected; and will work to elicit public awareness of the vulnerability of the species.

Air Quality Resources Maximum protection of the monument's air quality could be achieved by the state of Arizona redesignating the monument from Class II to Class I via the State Implementation Plan for Air Quality.

Visual Resources Actions would be taken to ensure preservation of visual resources, including consideration of building sites and sustainable design guidelines for all new developments. An attempt would be made to move and bury existing power lines. The NPS would make every effort to offset the costs associated with this project, and would also attempt to coordinate this project with concurrent disturbance associated with planned building or improvement.

Visitor Use and Associated Facilities

In order to truly appreciate and to protect this fragile ecosystem, there must be opportunity to educate the visitor to this monument. These would include interpretive programs, environmental awareness education, regional cooperation, biosphere goals, and history of the people and their relationship with the land.

The Organ Pipe Cactus NM is situated in the heart of the Sonoran Desert, and shares borders with the Tohono O'odham Nation, with private lands, with the Cabeza Prieta National Wildlife Refuge, and with the Sonoyta Valley in Mexico. Because of the valuable resources which are located within the monument, and because of the mandates of the NPS, there is some responsibility on the part of the monument staff to provide leadership and behavioral role models for preservation, education, and maintenance. The monument staff welcomes input and guidance from all neighbors, and works at keeping the monument a place where all can enjoy the natural environment in a safe and fulfilling way.

- An interpretive component would be added to the new Science, Education, and Resources Management Center in the Twin Peaks area. This would not only add much needed space and facilities, but it would also focus the current interpretive efforts.
- Information portals would be established along State Route 85, the main route through the monument. These portals would be very simple, consisting of a picnic table, shade, and some signs with basic interpretive material on them. These would serve as an educational respite for travelers and highlight the fact that they have entered a special area, a National Park.
- Interpretative facilities would also be built in cooperation with other agencies, the most notable being an inter-agency information and orientation center in the Why area. Other facilities could consist of demonstrations, simple portals or pullouts with information on signs, or other mutually agreeable programs or facilities. The NPS would also cooperate with the International Sonoran Desert Alliance (ISDA) to establish a tri-national, tri-cultural center in the Lukeville area.

Camping The existing campground in Twin Peaks would remain. Opportunities for primitive camping would be increased, by providing 20 new walk-in campsites up-canyon from the existing group campground in the Twin Peaks area. Parking in this area would be expanded to accommodate this use. In addition, a feasibility study would be prepared to determine if any additional campsites could be added at Alamo Canyon Wash without affecting endangered species. A day-use only parking area for six vehicles would be designated within the existing loop drive. Previously, the proposed action called for development of up to four campsites in this area. The NPS reconsidered this proposal based on consultations with the U.S. Fish and Wildlife Service (see Appendix A).

Roads and Trails The existing road network would be retained, except that some roads in the Twin Peaks area would be re-aligned. At Twin Peaks, approximately 800 ft. of new road would be constructed, and a corresponding length of road removed and restored. Visitors and employees would have separate access and parking areas. A new turn around with about 400 ft. of new road would be added at the entrance to Puerto Blanco Drive.

There would be eight new trails added (8.9 miles), of which handicap-accessible trails would be 5.5 miles. There would also be two new hiking routes (13.5 miles), which would be marked on maps only, and would remain undeveloped and unmaintained. For most of the trails discussed in this section, "new" trails are actually social trails which have been carved out by common use. Designating them trails would help manage visitor use in these areas so that no additional disturbance would occur. Signs would be added along these and existing hiking routes to enhance interpretation and education, and to allow visitors greater access to existing resources.

State Route 85 State Route 85 runs for approximately 22 miles through the monument. Management emphasis for this road would be to develop a program in concert with the Arizona Department of Transportation, Arizona Game and Fish Department, U.S. Fish and Wildlife Service, and others to achieve the following objectives:

- gather baseline data on the extent of traffic impacts on wildlife, vegetation, cultural resources, human safety, and the visitor experience
- explore and implement measures and technologies to reduce impacts on monument resources while accommodating traffic
- establish an educational program to promote public support and compliance.

Quitobaquito Quitobaquito is an area which holds many precious resources, natural, cultural, and ethnographic. The NPS would make no decisions about this area which were sudden or uninformed. Because of the O'odham history with this place, they would be included in the decision-making process.

Current plans are to move the parking area, convert the existing road to a handicap-accessible trail, and "formalize" some of the current social trails so that further erosion would be prevented. At the present time, there is uncontrolled use, and it is hoped that marking and improving trails which do not harm wildlife or damage the existing riparian areas would result in an overall net reduction in disturbed land. A study would also be developed to determine if limits to use would help protect endangered wildlife in the area.

Park Operations and Associated Facilities

The NPS maintains its facilities in a manner that ensures the health and safety of its visitors. It also wishes to maintain the lands in an appropriate and respectful manner. There are, however, fiscal realities which must be attended to in these decisions.

- The NPS would seek alternative funding or partnership arrangements for staffing, and would of course continue to rely on volunteers.
- The present complement of staff at Organ Pipe Cactus NM is 27 full time employees. The monument's operating budget in 1994 was $1,127,000, with an additional $181,000 for drug enforcement activities. In light of budgetary constraints at the federal level, the plan proposes adding one staff member per year for the next fifteen years to accommodate the growth associated with increased visitation.

There is an office shortage at the monument, so some of the existing housing has been converted into offices. With the addition of new employees, this shortage will become even more acute. There will need to be some new building, and some conversion of current buildings in order to accommodate the staff safely and to provide work space in which people can be productive.

- The following plan would satisfy office, work and storage needs in a cost effective manner. The NPS would seek partnership for 2,000 square feet of administrative office space in the underutilized federal facilities in the Customs and Immigration Reserve in the Lukeville area. The maintenance area at Twin Peaks would be expanded to accommodate 2,000 square feet of area for maintenance activities, including work space, shops, and office space. A 4,000 square feet ranger operations and fire station with a helicopter pad would be constructed at this site, also.

Seasonal Needs There is a housing shortage at the monument. Because activity at Organ Pipe Cactus NM is seasonal, with the winter season being busier, there is a fluctuation in the amount of housing that is needed during different parts of the year. Affordable, short-term housing is difficult to find during the busy part of the year in the neighboring communities.

- The NPS will have to build some housing to accommodate seasonal workers. The NPS estimates needing 10 total bedrooms to meet this need, contained in apartments or efficiencies. We would seek to do so in Lukeville as a partnership.

Plan Implementation

The General Management Plan is intended to provide comprehensive, general guidance for the next 10-15 years. Although priorities have been established, situations change over time, and new information or new personnel might cause some priorities to be shifted. The ability of the NPS to implement planned actions is also based on funding availability, which is determined by the federal government. This source of funding has shown itself, particularly in the past year, to be somewhat unpredictable.

The NPS, as well as other federal agencies, has sought partnerships, donations, and volunteer time to offset costs. This effort will continue.

The prioritization of the projects in this plan are based on health and safety of staff and visitors, as well as on legislative requirements. For more information about the second and third level of priorities, please see the Supplement section under "New Proposed Action Alternative" titled "Plan Implementation and Costs". The first priorities to be implemented in this plan include:

- build the fire station
- develop and improve trails at Quitobaquito
- form a partnership with ADOT to address issues associated with State Route 85
- establish pull-outs on State Route 85
- develop agreements between the Tohono O'odham and the NPS
- inventory, monitor, and mitigate impacts to threatened and endangered species (plant and animal)
- establish a program to mitigate impacts occurring from outside the monument (particularly to water and air)
- establish safety programs for abandoned mine lands
- inventory, evaluate, and monitor programs to protect cultural resources

Once a Record of Decision has been signed, the NPS hopes to implement all of the proposed action in the next 10 to 15 years.

Final Environmental Impact Statement

Guide to the Final Environmental Impact Statement

To meet the requirements of the National Environmental Policy Act (NEPA), portions of both draft documents the Draft GMP/DCP/EIS and the Supplement are incorporated by reference into this document. Together, the combined sections of the Draft GMP/DCP/EIS, the Supplement, and this document, comprise the final environmental impact statement.

The following table was prepared to serve as a guide for the reader to locate the most informative and relevant sections from each of these documents that make up the Final EIS. Please refer to the following Errata section of this document for any factual corrections to the sections.

TABLE 1: GUIDE TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT

For the following sections:	*Please refer to these documents:*
Summary	
Summary Comparison of Alternatives and Consequences	Supplement
Purpose and Need for the Plan	
Background	Final EIS
Purpose and Need	Final EIS
History of the Plan	Final EIS
Legislation	Draft GMP/DCP/EIS, Appendix A, and Final EIS, Appendix D
Affected Environment	
General Description of the Park	Final EIS
Affected Environment	Draft GMP/DCP/EIS
Threatened and Endangered Plant Species	Draft GMP/DCP/EIS, Appendix C
Threatened, Endangered, Candidate, and Rare Wildlife Species	Draft GMP/DCP/EIS, Appendix D
Alternatives and Environmental Consequences	
Alternatives Considered but Rejected	Supplement
Existing Conditions/No Action Alternative	Draft GMP/DCP/EIS, in addition see *Actions Common to All Alternatives,* in the Supplement
Consequences of No Action Alternative	Draft GMP/DCP/EIS
Former Preferred Future Alternative	Draft GMP/DCP/EIS, in addition see *Actions Common to All Alternatives,* in the Supplement
Consequences of Former Preferred Future	Draft GMP/DCP/EIS
New Ideas Alternative	Supplement
Consequences of New Ideas Alternative	Supplement
New Proposed Action Alternative	Supplement
Consequences of New Proposed Action	Supplement, and *Appendix A: Biological Assessment and Final Opinion* in Final EIS
Additional mitigation measures	Supplement, Appendix I, and *Appendix A: Biological Assessment and Final Opinion* in Final EIS
Cultural Compliance Requirements	Draft GMP/DCP/EIS, Appendix D
Biological Assessment and Final Opinion	Final EIS, Appendix A

Comments and Responses	
Comments and Responses on the Draft GMP/DCP/EIS	Final EIS
Tribal and Agency Comment Letters on the Draft GMP/DCP/EIS	Final EIS, Appendix B
Comments and Responses on the Supplement	Final EIS
Comment Letters on the Supplement	Final EIS, Appendix C
Consultation and Coordination	
Scoping Process	Draft GMP/DCP/EIS, in addition see *An Update on Public Involvement and the Planning Process* in the Supplement
Native American Consultation	Draft GMP/DCP/EIS, in addition see *An Update on Public Involvement and the Planning Process* in the Supplement
Consultations with the U.S. Fish and Wildlife Service and Arizona Fish and Game Department	Appendix G in the Supplement, in addition see *Appendix A: Biological Assessment and Final Opinion* in the Final EIS
Planning Team and Contributors	Draft GMP/DCP/EIS
Bibliography and Index	
Bibliography	Draft GMP/DCP/EIS
Index	Supplement

Errata

Many of the public and agency comments suggested corrections to the text of various sections in the documents. Since many of these corrections help to clarify a point being made, or to correct a fact, it is important that these changes be made. A list of the corrections to the Draft GMP/DCP/EIS and the Supplement follows.

CORRECTIONS TO THE DRAFT GMP/DCP/EIS

Summary

Page v-xxv: delete entire *Summary* section, instead refer to *Summary* section in the Supplement.

Page 3, 1st column, 7th bullet: change "302,000 hectare care area" to "302,000 hectare core area."

Desired Futures

Page 12, 1st column, paragraph 4, 3rd sentence: replace "NAFTA has sent in motion" with "NAFTA has set in motion."

Page 12, 1st column, paragraph 4, 4th sentence: delete "resource depletion" after the word " Mexico."

Page 12, 2nd column, under *Cooperative Management,* second bullet: add "including the Tohono O'odham Nation" as the very last phrase of the sentence.

Alternatives Considered but Rejected

Page 18, left column, paragraph 1, last sentence: replace "*the Proposed Action*" with "*The Preferred Future.*"

Resource Management

Page 23, left column, paragraph 2: add "of the National Historic Preservation Act" after "section 106."

Page 24, right column, under *Native American Consultations,* first sentence: replace "Indian" with "Indians", and add "as amended in 1992" to the end of the sentence.

Page 25, table 1, second sentence: add "Eligible" after "National Register."

Interpretation

Page 29, right column, paragraph 4: the word "exhibitry" is used by interpretative planners as in the sentence: "Some exhibitry [exhibits] would be provided to interpret the revegetation program, methods of propagating deserts plants, and the importance of gene pools in biological diversity."

Page 31, left column, paragraph 4, last sentence: delete "the National Environmental Protection Act."

Page 64, right column, paragraph 2: delete the last sentence as it is repeated.

Page 94, left column, paragraph 1, fourth sentence: replace "300 person" with "300 persons".

Page 73, left column, paragraph 2, before the last sentence of the 2nd paragraph: insert "In 1996 there have been documented instances of predatory exotic fish being placed into Quitobaquito springs."

Page 77, right column, paragraph 2: replace "Quercus ajoensis" with "Quercus turbinella", and replace "Juniperus monosperma" with "Juniperus coahuilensis."

Page 78, right column, paragraph 2, sentence 3: insert "Brassica tournefortii."

Cultural Environment

Page 80, left column, under *OVERVIEW:* add the following at the beginning of this section: The National Park Service acknowledges that the archeological, ethnographic, and historical information presented below in the Cultural Environment section is based upon the Euro-American disciplines of archeology, cultural anthropology, and history. The O'odham world view is different. It is our understanding that the O'odham believe they have been in the area since time immemorial, and that all parts of the ecosystem — water, land, and culture — are integrated, cannot be separated and are sacred.

On page 80, left column, paragraph 1, second sentence: add "It is presently believed by most archaeologists that" to the beginning of the sentence. In addition, insert the following sentence after the first sentence: "However, there is a minority opinion, exemplified by the work of Julian Hayden, that human occupation may have occurred much earlier, perhaps as long ago as 30,000 years or more.

On page 80, left column, paragraph 1, fifth sentence: change "Halocene" to "Holocene."

On page 83, left column under *Archeological Surveys:* add the following at the end of this paragraph: "The next major archeological work took place on the neighboring Cabeza Prieta National Wildlife Refuge in the mid-1960s. Bernard Fontana surveyed the area and wrote an archeological report in 1965."

Page 88, left column, paragraph 2, end of the fourth sentence: add the following sentence: "The Tohono O'odham Nation is currently operating under a constitution adopted in 1986, which superseded the one of 1937."

Visitor Use and Experience

Page 90, left column, first paragraph: replace "50-59 age bracket" with "60-69 age bracket."

Surrounding Land Uses

Page 97, left column, paragraph 1: change the word "owned" to "administered."

Page 97, left column, paragraph 4, second sentence: insert the following into the end of the sentence: "who is charged with protecting this area of the Sonoran Desert."

Page 97, left column, paragraph 3, fifth sentence: change "The airspace above the refuge is used" to "The airspace above the refuge was once used."

Page 100, right column, paragraph 2 under *Mexico,* last sentence: change "2 miles south" to "3 miles south."

Environmental Consequences

Page 106, left column, paragraph 3, first sentence under *Cultural Resources:* change "archeologic" to "archeological."

Page 107, right column, paragraph 3, third sentence: delete the word "Indian."

Page 112, left column, paragraph 2, sentence 1: delete first part of sentence; the sentence should begin with "The Mexican rosy boa."

Page 116, left column, first paragraph, last sentence: insert "(Gambel's quail, house finch, white winged dove, mourning dove, canyon towhee, cactus wren, black throated sparrow, hooded oriole)" after "some native."

Page 117, right column, paragraph 2, last sentence: replace "ethnographic" with "ethnographic."

Page 118, left column, top of the page: capitalize "Arizona Site Steward Program."

Page 119, left column, second paragraph, second sentence: change "impact" to "impacts."

Page 119, left column, second complete paragraph, last sentence: after "preserved" add "or removed and data recovered if necessary."

Page 124, right column, third paragraph, first sentence: add "major" before "development is planned." Also, delete the period after "wildlife habitat" and add "such as the Lukeville and Twin Peaks areas."

Page 149, Table 3: insert "Sand Tank Mountains" into comments on the Kofa mountain barberry. Also, insert "and Sand Tank mountains" into comments on Arizona Rosewood, and delete "only known local in U.S."

Bibliography

Add the following references to the bibliography:

Bahr, Donald, Juan Smith, William Smith Allison, and Julian Hayden

1994 *The Short Swift Time of Gods on Earth: The Hohokam Chronicles.* Berkeley: University of California Press.

Fontana, Bernard L.

1965 "An Archeological Survey of the Cabeza Prieta Game Range, Arizona." Tucson: Arizona State Museum. Prepared for the Cabeza Prieta National Wildlife Refuge, Ajo, Arizona, United States Fish and Wildlife Service, United States Department of the Interior.

Smith, Charles Walter

1992 "Wilderness Management and Use In and For Organ Pipe Cactus National Monument [Arizona]." Tucson: Thesis, Master of Arts in Geography, University of Arizona. Available from Ann Arbor, Michigan: UMI Dissertation Services, 300 North Zeeb Road, 48106, 800-521-0600, Order Number 1350942.

Urrea, Bernardo de

1775 "Census taken on the march through the interior of Papagueria of Bernardo de Urrea which began on October 10, 1775....Presidio of Saint Gertrude of Altar, November 7, 1775," Sonora, Mexico. Translated from the Spanish by Judith Van Horn and Larry Lee Norris, Denver, Colorado, August 13, 1993. Xeroxed copy on file, Organ Pipe Cactus National Monument, Arizona. Original probably from a legajo in the Provincias Internas section of the Archivo General de la Nacion (AGN), Mexico City, Mexico. Shows Quitobaquito to have a population of 27 men, 24 women, 11 boys, and 13 girls for a total of 75, all classified as converted Christian Indians. The total population of eight settlements or villages from Quitovac north to Quitobaquito is given as 1,390.

CORRECTIONS TO THE SUPPLEMENT

Summary

Page s-xii, first sentence under *Quitobaquito Management Area, New Proposed Action Alternative:* add the following at the end of the sentence: "except that visitors would not need a permit to visit this area."

Purpose and Need

Page S-4, first sentence after Public Comments: insert "including copies of serveral petitions with hundreds of signa tures" after "55 responses".

New Ideas Alternative

Page S-25, paragraph 2, fourth sentence under *State Route 85 Corridor Subzone:* insert "Arizona Fish and Game Department," before "National Biological Service".

Page S-27, last sentence under *Wilderness Management:* insert "Arizona Fish and Game Department," after "U.S. Air Force."

New Proposed Action Alternative

Page S-56, third sentence under *State Route 85 Corridor Subzone:* insert "Arizona Fish and Game Department and others" after "to work with ADOT."

Page S-64, first sentence under *Quitobaquito Springs:* add "except that visitors would not need a permit to visit this area" at the end of the sentence.

Environmental Consequences

Page S-75, after the last paragraph: insert the following:

> **Methodology**
>
> The methodology of assessing impacts of the alternatives varies depending on the topic and issues. NEPA requires federal agencies to disclose the context (regional or site specific concerns), duration (short term vs. long-term) and intensity of impacts. The method generally used is to review all best available information, consult with subject matter experts, and compare existing conditions against the probable impacts should the actions be implemented. Mitigation measures are included in the actions and analyzed as part of the proposal. During the analysis process, best professional judgement and expertise is used, and where data or conclusions are not clear, the plan identifies this for further study.
>
> The general management plan is a vehicle to establish long-term management objectives, identify issues, and establish courses of action, including areas of further study, necessary to address the issues. Therefore, the plan also recognizes that there are issues that must be addressed prior to actual implementation of any of these concepts. For this reason, the NPS has committed to collecting and considering all relative data when and if implementation plans proceed for the Alamo Canyon Wash Campground, Quitobaquito Springs, Twin Peaks, or other areas. NPS has also committed to conduct further environmental compliance for these areas as required by federal law; therefore, an environmental assessment would be prepared and be available for public review prior to implementation of any development decisions.

Page S-92, paragraph 2, third sentence under New Proposed Action Alternative, Visitor Use: delete the last sentence, and in its place, add the following paragraph:

> Therefore, visitor numbers would be higher under this alternative than the *New Ideas Alternative.* Visitors at Quitobaquito would be subject to the same actions proposed in the *New Ideas Alternative,* except that permits would not be required to visit the area, therefore visitor use impacts would be controlled mainly through formalized trails. It is difficult to predict whether visitor use would be greater or less than in the *New Ideas Alternative.*

Introduction to Comments and Responses

PURPOSE AND METHODOLOGY

Public and agency review of draft environmental impact statements helps to ensure quality in the planning process. Therefore, the National Environmental Policy Act (NEPA) directs the NPS to review and consider all comments, and then respond to substantive public comments in the final environmental impact statement. A substantive comment is defined as a comment that results in one of the following agency responses:

- a modification of the alternatives, including the proposed action
- development and evaluation of an alternative not previously given serious consideration by the agency
- improvement or modification of the environmental analyses
- factual corrections
- an explanation of why the NPS position is maintained and no further response by the agency is needed

To begin with, the planning team read each comment from each letter, petition, or public meeting resulting from the Draft GMP/DCP/EIS and the Supplement for specific suggestions or special emphasis. While all comments were considered by the NPS to determine appropriate management directions, the comments were not regarded as part of a voting process or statistical study.

The substantive comments resulting from the review are addressed in the following Comments and Responses sections, through changes in the text in the Errata section, or in both places. Since there were numerous substantive comments, many of which were duplicates or warranted a similar response, the comments were summarized by concern topics. This allows the reader interested in a particular topic to review the substance of all concerns raised and the agency s response to these concerns. Each substantive comment was summarized into only one concern topic. A list of the topics and the types of comments it contains can be found at the beginning of the following comments and responses.

ORGANIZATION

Responses to comments on the Draft GMP/DCP/EIS have been separated from those on the Supplement into two discussions: Comments on the Draft GMP/DCP/EIS, and Comments on the Supplement.

Substantive comments and NPS responses on the Draft GMP/DCP/EIS follow and are organized into:

- an index of the letters, petitions, and meetings containing comments on the draft statement
- a list of the topic categories and the types of comments contained therein
- a summary of the comments that led to and were addressed in the Supplement
- summarized comments by topic, that were not addressed by the supplement and still warrant an agency response
- in Appendix B, copies of comment letters from State and other Federal agencies and Tribal Governments as required by NEPA

Substantive comments on the Supplement and NPS responses to them, follow those on the Draft GMP/DCP/EIS and are organized into:

- an index of the letters, petitions, and meetings containing comments on the Supplement
- a list of the topic categories and the types of comments contained therein
- summarized comments by topic, and responses to them
- in Appendix C, a copy of all comment letters received in response to the Supplement — including those from other agencies and Tribal governments as required by law

Comments and Responses on the Draft GMP/DCP/EIS

COMMENTS ON THE DRAFT GMP/DCP/EIS

The following index lists the letters, petitions and meetings containing comments on the draft enivornmental impact statement. Pursuant to NEPA and NPS guidelines, some of the comment letters are printed in Appendix B as described below.

Public Agency and Tribal Government Comment Letters.
NPS guidelines require the NPS to print all public agency and tribal government letters. Please see Appendix B for a copy of the following letters.

Arizona Department of Environmental Quality
Arizona Department of Transportation, Highways Division
Arizona Game and Fish Department, Regional Habitat Program
Arizona Public Service Company, West Valley District
Tohono O'odham Nation, Gu-Vo District Governing Council
Tohono O'odham Nation, Hickiwan District Council
Tohono O'odham Nation, Legislative Branch
Pima Association of Governments
U.S. Air Force, Luke Air Force Base
U.S. Bureau of Indian Affairs, Papago Agency
U.S. Bureau of Land Management
U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service, Arizona Ecological Services State Office

Tribal Government Meetings
Consultations during several meetings with the Tohono O'odham and Hia-Ced O'odham were also considered. Each meeting date and location is listed.

June 8, 1995, Gu Vo District of the Tohono O'odham Nation, held within the Tohono O'odham Nation, Arizona
June 9, 1995, Legislative Council of the Tohono O'odham Nation, held in Council Chambers in Sells, Arizona
June 9, 1995, Hickiwan District Council of the Tohono O'odham Nation, held in within the Tohono O'odham Nation, Arizona
November 7, 1995, held within the monument at Quitobaquito Springs
November 21, 1995, held within the monument at Twin Peaks

University Comment Letters: *(Please note, the following letter is not printed within this document)*
University of Arizona, Udall Center for Studies in Public Policy

Special Interest Groups: *(Please note, the following letters are not printed within this document)*
Defenders of Wildlife, Wildlife Counsel
The Economic and Environment Association
National Parks and Conservation Association, Southwest Region
The Wildlife Society, Arizona Chapter

Individual Comment Letters: *(Please note, the following letters are not printed within this document)*

Bell, Tillman; submitted two separate letters
Cherry, James F.
Fontana, Bernard L.
Gay, Al E.
Hargis, Roberta
Henry, Steven
Kerber, Ken
Martin, Lee W.
Mason, Jim
Tasker, Lucy

Petition Letters

The NPS received and considered copies of several Petitions with hundreds of signatures. Each type of petition has been numbered and the key subject matter defined. The copies of the petitions were either submitted by the Economic and Environment Association, or Mr. A.E. Gay.

P-1, Five Points about the proposed General Management Plan
P-2, Reaction to restrictive Border Crossing
P-3, Toll Road to Rocky Point; help us defeat them
P-4, Citizens for Unrestricted Travel
P-5, No National Cactus Park
P-6, Request for Airport Runway
P-7, Death trap; please make State Highway 85 safe

Public Meetings

Comments from the following public meetings were also considered. Each meeting date and location is listed.

May 8, 1995, Sonoyta, Mexico
May 9, 1995, Ajo, Arizona
May 10, 1995, Phoenix, Arizona
May 11, 1995, Tucson, Arizona
The May, 1995 meeting of the International Sonoran Desert Alliance, within the Tohono O'odham Nation in Arizona

RESPONSES TO COMMENTS ON THE DRAFT GMP/DCP/EIS BY TOPIC

Comments and related responses on the Draft GMP/DCP/EIS are summarized and organized into the following categories. Each substantive comment appears in only one of the following categories. The comments and responses for each category follow.

Comments addressed by Preparation of the Supplement: NPS response to most of the comments on the Draft GMP/DCP/EIS was to prepare the Supplement.

Planning Process: Responses to comments that pertain to the process and development of general management plans.

State Route 85 and other roads: Responses to comments that pertain to resources, ownership, and other concerns regarding the State Route 85 corridor and other roads in the monument.

Other developments: Responses to comments pertaining to development of trails, relocation of the power lines, and other facilities within the monument.

Endangered Species Act: Comments regarding threatened and endangered species and the Endangered Species Act, including Section 7 consultation with the U.S. Fish and Wildlife Service.

Wildlife Resources: Comments regarding potential affects on wildlife resources

Vegetation and Soil Resources: Comments regarding potential affects on vegetation and soil resources

Air and Water Resources: Comments regarding potential affects on air and water resources.

Cultural Resources and O'odham Consultations: Comments regarding the protection and potential effects on cultural resources and consultations between the NPS and Tohono O'odham and Hia-Ced O'odham.

Comments Addressed By Preparation of the Supplement

The Draft General Management Plan/Development Concept Plan/Environmental Impact Statement (GMP/DCP/EIS) was released in May of 1995. Comments and concerns raised by the public and various agencies reviewing the draft

plan were received by the National Park Service (NPS) in letters, petitions and at public meetings. These comments fell into six categories:

- Concerns regarding actions affecting use of State Route 85
- The number of alternatives presented
- New ideas about cooperation between the NPS and others, and about development both within the monument and outside monument boundaries.
- Requests for more involvement by the Tohono O'odham Nation
- Costs associated with implementing the alternatives
- Mitigation of impacts on natural resources, especially threatened and endangered species.

After reviewing these and all other comments, the NPS determined a Supplement to the Draft GMP/DCP/EIS was needed, and subsequently prepared one. The Supplement addresses all of the comments that fall into one of the six categories, therefore, they are not further discussed here.

Comments that were not addressed in the Supplement, either consist of factual corrections and are listed in the preceding Errata section of this document, or were determined not to warrant further agency response, and are addressed by topic, in the following sections.

Planning Process

Comment Letters: Gay, A.; Kast, H.; Mason, J.; Economic and Environment Association; U.S. Environmental Protection Agency; Public Meetings; Petitions

Comment:
An appropriate need statement should briefly summarize the purpose and need for the general management plan.

Response:
Please review the Purpose and Need section in this Final EIS.

Comment:
We suggest a matrix approach to the plan which would compare a range of reasonable alternatives for development, visitor use management, and other concerns

Response:
This general management plan was prepared in accordance with NEPA, other laws, and NPS management policies. Please see the Summary Comparison of Alternatives and Summary Comparison of Consequences tables presented in the Supplement to compare alternatives or environmental consequences.

Comment:
We request that the NPS develop and submit a new draft plan and that advertised public hearings be held before the new plan is accepted for final review.

Response:
The NPS prepared a Supplement and distributed it to more than 600 individuals, agencies, special interest groups, and many others. The NPS held public meetings to encourage as much response as possible to the new alternatives, including the agencies preferred alternative, and related consequences. The NPS posted flyers in the communities that public meetings were held and announced the time and location of public meetings in the Ajo Copper Mountain News, in Ajo, Arizona.

Comment:
We request Organ Pipe Cactus National Monument be closed and removed from the NPS budget.

Response:
Only the President and Congress of the United States have the authority to change legislation that created the monument, or close or remove it from federal ownership and management.

Comment:
Why are costs so excessive?

Response:
NPS is required to estimate the total amount of costs the federal government can expect to incur on projects. Refer to page S-44 in the Supplement, under Escalated Costs, for a more complete explanation.

State Route 85 and Other Roads

Comment Letters: Cherry, J.; Conant, C.; Henry, W.; Economic and Environment Association; National Parks and Conservation Association; Public Meetings; Petitions

Comment:
One commentor believes the NPS has authority to lower the speed limit to whatever speed might be safe, and most appropriate for protection of wildlife. Another commentor suggests enforcement of the current speed limit would be more appropriate than a reduction. Another proposes installation of wider shoulders along the road. One comment letter asks the NPS to discuss how improving the road condition would have positive impacts on all types of traffic, making SR 85 safer for vehicles, bicyclers, hikers, wildlife, thus enhancing the visitor experience. Another asks why are federal employees, not State law enforcement officers patrolling our state highway?

Response:
Please see the first response under the topic of State Route 85 in the following *Responses to the Supplement* section. The response covers these issues as well as other comments generated by the Supplement.

Comment:
Please clarify exceptions to improving unpaved roads; safety, maintenance, and resource considerations are too broad and leave very little out.

Response:
The NPS is interested in maintaining the rural experience on these roads. Only improvements such as minor re-routes or realignments would be considered to keep roads safe and passable. Vehicle use on unpaved roads can sometimes lead to increased erosion, which in turn can create hazardous road conditions and loss of soil resources.

Comment:
What NAFTA related improvements are proposed by the State?

Response:
The Arizona Department of Transportation, Transportation Planning Division issued a 1993 report titled "The Arizona Border Infrastructure Needs Assessment," which updates and expands on an earlier paper, "The Effects of Free Trade with Mexico on Arizona's Highways". Addressed in this report are improvements needed on state highways linking Mexico and the Interstate System. Also included in the report is the 1994-1998 Five Year Construction Program, which outlines estimated improvement costs (reconstruction, resurfacing, and widening) needed to upgrade State Route 85 to its cross section design standard. It is noted that widening would account for a majority of improvement costs on State Route 85.

Comment:
Under Revised Statue 2477, Walls-Well Road should still be open to public use.

Response:
The NPS does not believe that this road falls under this classification, and therefore, was able to close it.

Other Developments

Comment Letters: Gay, A.; Defenders of Wildlife; Economic and Environment Association; National Parks and Conservation Association; U.S. Environmental Protection Agency; U.S. Bureau of Land Management; Tohono O'odham Nation, Hickiwan District Council; Public Meetings; Petitions

Comment:
Alternative 2 predicts visitor security problems at Quitobaquito. How does Alt 1 avoid this?

Response:
The NPS believes that moving the parking area out of sight from the current location will substantially decrease the incidence of vehicle break-ins and theft.

Comment:
We would like a runway airport in Lukeville.

Response:
The NPS does not believe that providing an FAA (Federal Aviation Administration) approved runway in Lukeville meets the purpose of the monument nor the needs of visitors. There is an FAA approved airport that can serve visitor needs, located north of the monument in Ajo, Arizona. Therefore, the NPS considers this proposal to be beyond the scope and intent of this general management plan, and consequently, rejects the idea.

Comment:
Will the science center be aligned with other agencies or universities, and will fees be charged to researchers interested in using this facility?

Response:
The development concept plans (DCPs) contained in the general management plan are just that conceptual — ideas for ways to implement NPS goals and management objectives. The next step will be to start the process of implementing these proposals. At that time the NPS will more fully develop the idea of the science center, including its management.

Comment:
Where is public reserve no. 88? Is it part of the Quitobaquito reserve?

Response:
Park records indicate that the Township and Range for this area have never been surveyed. Even the most current USGS (United States Geological Survey) maps do not indicate that Section surveys were done for this area. However, by comparing the pysical description in Executive Order of November 21, 1923 (page 137 in the Draft GMP/DCP/EIS) to areas on the USGS maps that have been surveyed, it seems likely that public water reserve no. 88 refers to the Quitobaquito area. Before the monument was established, this Exectuive Order withdrew the land from settlement, location, sale, or entry, and reserves them for public use in accordance the the provisions of Section 10 of the Act of December 29, 1916 (39 Stat., 862).

Comment:
Each proposed trail segment should be explained, and have its potential impacts considered more closely. We feel that the Salt Trail is very sacred and therefore, use by non-O'odham should be restricted.

Response:
In the Supplement, the discussion and analysis of trails was improved and a new development concept and trail alignment to Quitobaquito was proposed.

Most of the routes in the proposed action occur in heavily used areas where trails have been worn and developed by use. Because most have been previously disturbed, NPS feels that formalizing these routes will accommodate visitor desire for additional trails, while better managing this use and minimizing additional disturbance of wilderness lands. Cumulatively, there are less than two miles of new routes proposed.

Comment:
The general management plan should state when the next scheduled replacement cycle of the power lines is projected. If the power lines are relocated, who would bear the cost of restoring the 27 miles of right-of-way wilderness?

Response:
The replacement cycle of power line poles is the life of the pole, therefore replacement of power lines and poles is performed on an as-needed basis. Also refer to the Supplement, page S-28 for a discussion of the ways in which the NPS proposes to offset potential costs to tax or rate payers.

Endangered Species Act

Comment Letters: Arizona Wildlife Society; Defenders of Wildlife; Bureau of Land Management; U.S. Fish and Wildlife Service; Arizona Game and Fish Department; Economic and Environment Associations

Comment:
There were numerous concerns raised about potential impacts of proposed actions on threatened and endangered species.

Response:
Please see pages S-17, and S-80 through S-85 of the Supplement for further discussion on threatened and endangered species management. Additionally, the NPS has consulted with the U.S. Fish and Wildlife Service and has prepared a biological assessment which further analyses potential effects to listed species. Please see Appendix A in this document for copies of the NPS's biological assessment and U.S. Fish and Wildlife Service's formal opinion.

Comment:
Where are the statistics to back up the claim that the Mexican rosy boa is being significantly impacted by highway mortality along State Route 85? The NPS should provide information on its range, population, and number of road kills.

Response:
The Mexican rosy boa could be encountered in any rockpile habitat, and adjacent sloping bajadas in the monument. In cooperation with the NPS, Philip C. Rosen and Charles H. Lowe, Department of Ecology and Evolutionary Biology, University of Arizona, have prepared a report on the Ecology of the Amphibians and Reptiles at Organ Pipe Cactus National Monument including highway mortality rates. The report estimates as many as 500 snakes are killed per year by vehicles on State Route 85. During the study, of the 368 snakes (20 species) observed on the State Route 85 transect, 104 were found live and 264 were found dead. Information contained in this report also supports the statement that the Mexican rosy boa has been significantly impacted by State Route 85. Only eight rosy boa have been recorded in the monument during a 4.5 year period from 1987 to 1992. Due to highway related mortality and poaching it appears that the rosy boa has been extirpated from some parts of the monument near the highway. As indentified in the Natural and Cultural Resources Management Plan, further research is needed on the ecology of the rosy boa including more details on distribution, mortality rates and population densities.

Wildlife Resources

Comment Letters: Arizona Wildlife Society

Comment:
No names are given of the native birds that may be impacted by the reduction of available water.

Response:
The general management plan has been modified to clarify this statement to include mourning doves, white winged doves, Gambel's quail and house finch populations.

Comment:
What are the impacts of the preferred future on wildlife in the area from predicted increases in visitation, new facilities and new trails?

Response:
Pursuant to NEPA, impacts to wildlife are discussed in the Draft GMP/DCP/EIS, page 115, and the Supplement, pages S-85 and S-86.

Vegetation and Soil Resources

Comment letters: Henry, S.; Arizona Wildlife Society; Tohono O'odham Nation, Gu-Vo District Council and Hia-Ced O'odham Program

Comment:
Might burying power lines cause a serious disturbance to vegetation and soil?

Response:
Yes, burying power lines would cause disturbance to soils and vegetation. However, the power lines would be buried along the State Route 85 road corridor, which has been previously disturbed during construction of this road. In all alternatives, there would be a net increase in revegetated and stabilized soils. See impacts to vegetation and soils in both the Draft GMP/DCP/EIS and the Supplement. Also, see Appendix I in the Supplement which states that all construction areas would be revegetated and sediment and erosion control measures would be followed to mitigate impacts to soils and vegetation.

Comment:
The ditch leading from Quitobaquito Springs does not allow for flooding of the adjacent area that contains medicinal plants. This problem must be corrected.

Response:
Please see pages S-15 and S-16 of the Supplement. As summarized from the Natural and Cultural Resources Management Plan, vegetation management includes the preservation of historically significant species.

Comment:
Because community integrity of the revegetated acreage is unknown, the increase of 171 acres should not be presented as a net increase that will offset the loss the 58 original acres.

Response:
The NPS proposes to restore disturbed areas to natural conditions, which would include restoration of community integrity. Please see page 113 in the Draft GMP/DCP/EIS and page S-111 in the Supplement for a discussion on revegetation.

Air and Water Resources

Comment letters: Martin, L.; Economic and Environment Association

Comment:
In-park sources of air pollution are listed as minimal. This is an oversight. The air quality in the main campground from the use of generators is unacceptable and a health hazard.

Response:
Please see page S-18 of the Supplement. Programs would be developed to monitor ambient air quality and visibility in the monument.

Comment:
How would redesignation from a class II to a class I area provide maximum protection of the monument's air quality if this would be insufficient in preventing further degradation of air quality and visibility from Mexico?

Response:
Please see page S-19 of the Supplement. In addition, the NPS would continue to work with resource specialists from Mexico to help improve and protect air quality.

Comment:
Why is the NPS using 1988 data from a report for a 1995 draft plan? Has NPS done any studies on groundwater depletions since 1988? What is the current status of the water table drop of the Twin Peaks well?

Response:
The alternatives in a general management plan are driven by the NPS analysis of best available information, and where data is lacking, NPS acknowledges that it will obtain further studies prior to actual implementation. In addition to the 1988 data, in 1993, depth to water measurements were made in 13 wells. As summarized in the Supplement, The Natural and Cultural Resources Management Plan identifies the need for continued ground water monitoring and a water conservation program. As stated in this general management plan, the NPS will continue to collect groundwater data both within the monument and on adjacent lands, and has committed to developing and implementing a water conservation program.

As for the Twin Peaks well, the last recorded NPS measurement of the water table in two wells in this area was taken on 8/23/78 and read 310 feet for both wells. The pump at one well was replaced in 1990; the contractors doing the replacement measured the water table at 320 feet. The same contractors replaced the pump at the second well in 1991 and recorded the water table depth at 325 feet. There may be several reasons for the apparent drop in water level. First, the techniques used in 1978 by the NPS may not have provided the most accurate measurement. Second, while the contractor may have used more accurate measuring techniques, there must be adequate recharge time or the measurements of the water table will not be accurate. In general, the NPS believes the increase in water use due to increased visitation has been minimal based on the fact that the pumps are run about the same number of days per week as they were in years past.

Cultural Resources and Tohono and Hia-Ced O'odham Consultations

Comment letters: Fontana, B.; National Parks and Conservation Association; U.S. Bureau of Land Management; U.S. Bureau of Indian Affairs; Tohono O'odham Nation, Gu Vo District and the Hia-Ced Program; Tohono O'odham Nation, Legislative Council; Tohono O'odham Nation, Hickiwan District; Public Meetings

Comment:
The name *O'odham* means "people" or "the people" and signifies both the singular and the plural in the O'odham language. It should be used the same way in English, that is, without adding "s" for the plural and without adding "people" as in the phrase "the O'odham people."

Response:
The Supplement and this document adhere to the O'odham usage suggested by the comment.

Comment:
If the term "American Indian" is used instead of the more inclusive "Native American," an explanation should be provided.

Response:
The NPS recognizes that "Native American" is the more inclusive term over "American Indian". However, we understand that there is some preference among members of the Tohono O'odham Nation for the term *American Indian* over *Native American* as a generic term for the indigenous peoples of North America. That is why American Indian was used in certain places in the Draft GMP/DCP/EIS. The term Native American is used to refer to Consultation with American Indians and other Native Americans as required by the National Historic Preservation Act of 1966, as amended.

Comment:
We request that the Tohono O'odham Nation be on a decision making level of the monument's management and administration. We request that the whole monument area be incorporated as a cultural and traditional use area of the Tohono and Hia-Ced O'odham.

Response:
The NPS recognizes that what is now the monument was once part of the traditional territory of the Hia-Ced O'odham and Tohono O'odham, especially the Hia-Ced O'odham, and it looks forward to more interpretation of this subject through O'odham participation. The NPS cannot divest its inherent federal responsibility, which makes neither proposal possible. However, regular consultation with the O odham Nation is a goal of the NPS and will be addressed in the government-to-government agreement to be sought with the Tohono O'odham Nation.

Comment:
We believe the O'odham were not adequately consulted about possible changes for visitor access to Quitobaquito Springs.

Response:
The O'odham idea of moving the parking lot, avoiding the sacred Salt Trail, and using the current parking lot and road as an access trail to Quitobaquito became part of the proposed action in the final general management plan. In addition, the NPS proposes to seek O'odham involvement throughout implementation stages of the final general management plan.

Comment:
The Quitobaquito culture area is a much larger area than indicated in the plan, including areas where there once were fields and homes in Mexico and other sites and villages on the U.S. side.

Response:
The NPS has enlarged the Quitobaquito Springs Management Area in the proposed action and continues to seek archeological, ethnographic, and historical information from both sides of the international border to aid resources management and interpretation.

Comment:
We are concerned that the O'odham would have to reveal more of their history, that we do not want made public.

Response:
The NPS only seeks or requests cultural information that a particular people is comfortable sharing. We respect the right of the local or regional government of the O'odham to control and share this information on O'odham terms.

Comment:
Please acknowledge the sacredness and importance of the natural spring water of Quitobaquito Springs. The O'odham are interested in conducting a joint ethnobotany and ethnobiological study, along with a natural and cultural resource study of the Quitobaquito Springs water flow to the pond.

Response:
The NPS acknowledges the sacredness and importance of these waters. Doing a joint study will be considered as part of the monument's Natural and Cultural Resources Management Plan. Additionally, the study could be part of future discussions about the government-to-government agreement being sought by the NPS with the O'odham.

Comment:
The O'odham request that certain ethnographic corrections be made to the completed nomination form of I'itoi Mo'o (Montezuma's Head) to the National Register of Historic Places, and to the ongoing nomination form of Quitobaquito Springs.

Response:
The O'odham are invited to make known to the Arizona State Historic Preservation Officer in Phoenix, any suggestions or corrections to the nomination form for I'itoi Mo'o (Montezuma's Head), which was listed in the National Register of Historic Places as a traditional cultural property on May 2, 1994. Quitobaquito Springs

was formally determined eligible for listing in the National Register of Historic Places on August 18, 1994. The Quitobaquito nomination form is awaiting further O'odham consultation according to their wishes, as will be any future nomination forms of possible additional sites.

Comment:
Who has or should have access to information provided by the O'odham?

Response:
The question raised could be part of future discussions on the proposed government-to-government agreement being sought by the NPS with the O'odham. Confidentiality of the O'odham is protected by several laws and executive orders of the President of the United States including: Executive Order 13007, signed by President William Jefferson Clinton on May 24, 1996; the National Historic Preservation Act of 1966 (Public Law 89-665), as amended; the American Indian Religious Freedom Act of 1978 (Public Law 95-341); the Religious Freedom Restoration Act of 1993 (Public Law 103-141); the Native American Graves Protection and Repatriation Act of 1990; and the Memorandum of April 29, 1994, of President William Jefferson Clinton.

O'odham questions about natural and cultural resources management and other forms of land management, access to culturally important sites and their protection, working regularly with a park cultural resources specialist, and use of existing information in the monument's library and archives can all be addressed in the government-to-government agreement being sought between the monument and the O'odham.

Comment:
The Bureau of Indian Affairs indicates that the NPS has not made clear its obligation to notify promptly neighboring Native American groups during archeological discovery situations, and the National Parks and Conservation Association says that any cultural resource treatments for historic protection and preservation and the possible agreement being sought between the NPS and the Tohono O'odham Nation should be subject to public review before initiation of a project.

Response:
The NPS recognizes its responsibility to comply with all applicable laws, regulations, and policies regarding any federal actions or undertakings stemming from the approval of the general management plan, including any (1) archeological discovery situations to contact promptly appropriate neighboring Native American groups over the course of archeological surveying, mitigation, or monitoring; (2) cultural resource treatment projects; and (3) agreement documents involving cultural and natural resources that the Monument might enter into with the Tohono O'odham Nation.

Comment:
The NPS has not conducted enough government-to-government consultations with the Tohono and Hia-Ced O'odham over the course of researching and writing the general management plan.

Response:
The inclusion of O'odham members on future planning teams for specific issues, as requested by the Tohono O'odham Nation, can be discussed as part of the Memorandum of Agreement being sought with the Tohono O'odham Nation. The incorporation of "an O'odham perspective in the [monument's] management strategy" can also be a topic of discussion for this agreement, especially for cultural resources management.

Comment:
We object to any proposed land exchange between the O'odham and the NPS.

Response:
The NPS has specified that it will not pursue a land exchange unless all parties involved are in agreement. See the Boundary Adjustments section in the Supplement, page S-64.

Comments and Responses on the Supplement

COMMENTS ON THE SUPPLEMENT

The following index lists the letters, petitions and meetings containing comments on the Supplement. Copies of the comment letters are printed in Appendix C.

Public Agency and Tribal Government Comment Letters
NPS guidelines require the NPS to print all public agency and tribal government letters. Please see Appendix C for a copy of the following letters.

Arizona Department of Transportation, Highways Division
Arizona Game and Fish Department, Regional Habitat Program
Tohono O'odham Nation, Gu-Vo District and Hia-Ced O'odham Program
U.S. Bureau of Indian Affairs, Papago Agency
U.S. Bureau of Land Management, Arizona State Office
U.S. Bureau of Land Management, Phoenix District Office
U.S. Environmental Protection Agency

University Comment Letters
Copies of the following letters are contained in Appendix C.

University of Arizona, College of Arts and Sciences,
Department of Ecology & Evolutionary Biology, Malusa, Jim
University of Arizona, College of Arts and Sciences,
Department of Ecology & Evolutionary Biology, Rosen, Phillip

Special Interest Groups Comment Letters
Copies of the following letters are contained in Appendix C.

Defenders of Wildlife, Wildlife Counsel
Economic and Environment Association
Traditional O'odham Leaders of the Traditional O'odham in Mexico

Individual and Business Comment Letters
Copies of the following letters are contained in Appendix C.

Bellingham, John and Betty
Cole, Douglas
David, Gabrielle
Fahn, Jack D. and Betty H.
The Guest House Inn, and Mine Managers Inn Bed and Breakfast
Panther, Jeff
Rogers, Roc

Petition Letters and Public Meetings
The NPS received and considered copies of one petition with hundreds of signatures. The key subject matter is defined, and the group listed who submitted the petitions to the National Park Service. One public meeting was held and is listed below. Comments from this meeting were also considered.

PS-1, submitted by Economic and Environment Association

Public Meeting, March, 1996, Ajo, Arizona

RESPONSES TO COMMENTS ON THE SUPPLEMENT BY TOPIC

Comments and associated responses on the Supplement are summarized and organized into the following categories. Each substantive comment appears in only one of the following categories.

Planning Process and NEPA Analysis: Comments that pertain to the programmatic nature of NPS general management planning, the corresponding level of analysis required by the National Environmental Policy Act (NEPA), or are general in nature.

State Route 85: Comments that pertain to resources, ownership, and other concerns in the State Route 85 corridor. Comments regarding impacts of the Highway on threatened and endangered species occurring in this area are contained under the following Endangered Species Act category.

Endangered Species Act: Comments regarding threatened and endangered species and the Endangered Species Act, including Section 7 Consultation and the preparation of biological assessments. To aid the reader, the comments are presented by the following sub-topics: general topics, Sonoran pronghorn, lesser long-nosed bat, cactus ferruginous pygmy-owl, Mexican rosy boa, and Quitobaquito desert pupfish. Because of the connection of some of these species to use areas as well as the NEPA process and analysis, it is also suggested that the reader review those other topics.

Air and Water Resources: Comments regarding the protection of air and water resources.

Vegetation, Soil and Habitat Resources: Comments regarding potential affects on vegetation, soil, and habitat resources

Cultural Resources: Comments regarding the protection of and potential effects on cultural resources.

O'odham Consultations: Comments regarding consultations between the NPS and Tohono O'odham and Hia-Ced O'odham.

Visitor Use Numbers: Comments regarding carrying capacity and visitation levels.

Alamo Canyon Campground: Comments regarding further development and use of the Alamo Canyon Campground. Comments regarding the threatened and endangered species occurring in this area are contained under the Endangered Species Act category.

Quitobaquito Springs: Comments regarding the development and use of the Quitobaquito Springs area. Comments regarding the threatened and endangered species occurring in this area are contained under the Endangered Species Act category.

Lukeville Area: Comments regarding the impact of proposed actions on the Lukeville area.

Trails: Comments pertaining to trail development and management.

Redesignation: Comments regarding the proposal to redesignation the monument as a National Park.

Planning Process and NEPA Analysis

Comment Letters: Environmental Protection Agency; Defenders of Wildlife; Petition; Public Meeting

Comment:
It is not easy to understand the plan — only a lawyer can understand its implications. Please write in everyday English.

Response:
The New Proposed Action Alternative, which will become the final general management plan when the Record of Decision is signed by the NPS, is presented at the beginning of this document and has been re-written in an attempt to clarify its intent.

Comment:
The Supplement stated there were only 55 comments on the Draft GMP/DCP/EIS what about all the petitions?

Response:
This information has been corrected. Please see the preceding *Changes to the Supplement* in the *Errata* section, and both the *Comments on the Draft GMP/DCP/EIS* and *Comments on the Supplement* sections which contain an index of the letters, petitions, and public meetings.

Comment:
Did any of the comments say they want a new plan? Why not leave it wilderness if people don't want the plan? Who proposed and will approve the new plan?

Response:
The NPS is required by law to have a general management plan in place to guide comprehensive management of the monument over the next 10-15 years. The previous "master plan" was outdated and did not meet the requirements of a general management plan or address the current needs and issues facing the monument. After this final general management plan has been sent out to those on the mailing list, the NPS will wait a minimum of 30 days before signing a Record of Decision. Signing this document will allow the NPS to begin its implementation of the approved general management plan. Since most of the proposed actions are dependent on some type of additional funding, it is difficult to predict how long and when the monument will be able to implement these actions.

Comment:
Why not turn the monument into a wildlife refuge to save money and costs?

Response:
This was an alternative idea that was considered but rejected. Please see *Alternatives Considered but Rejected* in the Supplement.

Comment:
What is the NPS doing towards implementation of the Biosphere Reserve program?

Response:
This final document will serve as a general management plan in compliance with NPS policies, as well as a Man and the Biosphere plan as part of the Biosphere Reserve program. The general management plan proposes several actions designed to improve communications between the monument and its neighbors, and to protect the larger Sonoran Desert environment.

Comment:
How do we know what changes are made to the plan as it moves up the NPS chain of command? Do we have a chance to have input? Can you assure me there will be not changes to the plan between now and when you finish? What happens when the NPS makes a decision, can they do what they want?

Response:
After the final document has been sent to the agencies and individuals on the mailing list, the NPS must wait a minimum of 30 days prior to signing a Record of Decision and implementing the actions proposed in the general management plan. During this 30-day no action period, individuals can review the final document and comment to the agency. The NPS manages lands within the bounds of the Organic Act and other laws, executive orders, and management policies of this agency. Many of the proposed actions are general in nature and will require additional impact assessment and public input in compliance with NEPA and other laws.

Comment:
How does the plan affect Mexico?

Response:
The relationship between the United States and Mexico has changed during the general management planning process, as has the relationship between the monument and nearby communities. In the final general management plan, the NPS proposes to continue to work toward being a cooperative neighbor and calls for several actions to

promote and ultimately, protect significant natural, cultural, and historic resources throughout the Sonoran desert region in the United States, the Tohono O'odham Nation and Mexico.

The impact of the alternatives on Mexico has been considered and is presented in the Environmental Consequences sections of the Draft GMP/DCP/EIS and the Supplement. The impact analyses were based on best available information and were conducted pursuant to NEPA guidelines. Overall, increased visitation to the monument and surrounding area would be economically beneficial to surrounding communities in both countries. However, the rural character of these communities could be adversely impacted by the addition of new development and services. Cumulative effects of the general management plan when added to other regional activities would be moderate given NAFTA, and continuing increases in development and tourism-related industries in Puerto Penasco, Mexcio, Why, and the border patrol station in Lukeville.

Comment:
Prior to future planning stages, more information should be included in the final environmental impact statement, such as wilderness and trail management, specific mitigation measures, and guidelines and procedures regarding erosion control, drinking and ground water, threatened and endangered species, and land use inside and outside the monument.

Response:
Appendix I of the Supplement outlines mitigation measures that would be used before any specific action is implemented. The programmatic nature of many actions proposed in general management plans makes it difficult to quantify their environmental impact; consequently, more detailed site-specific planning and analysis would be required before implementing some actions contained in this document. These may include preparing project-specific environmental assessments, obtaining additional clearances and permits from regulatory agencies, or developing further mitigation strategies.

In addition, the NPS has consulted with the U.S. Fish and Wildlife Service and has prepared a biological assessment that analyzes the potential effects of the proposed action on federally listed, proposed and candidate species. See the attached biological assessment and formal opinion issued by the U.S. Fish and Wildlife Service, and page S-17 for a summarization of the Natural and Cultural Resources Management Plan, which addresses threatened and endangered species recovery plans.

Comment:
The final environmental impact statement should include a schedule for the proposed wilderness management plan and state that it will be released as a subsequent NEPA document. Also, the final environmental impact statement should discuss the mandatory criteria and guidelines for management of the wilderness areas, the current system of wilderness management at the monument, and identify the specific wilderness management zones.

Response:
A discussion of the schedule can be found in the Supplement under Plan Implementation and Costs, page S-65. As stated, implementation of the general management plan will primarily be determined by funding. In accordance with laws and policies, the proposed wilderness management plan will be subject to additional NEPA compliance. Discussion of current wilderness management can be found in the Affected Environment section of the Draft GMP/DCP/EIS, resource protection strategies can be found in the summary of the Natural and Cultural Resources Management Plan in the Supplement, while the current zoning system can be found in the Existing Conditions Alternative section of the Draft GMP/DCP/EIS. In addition, impacts on wilderness are discussed for each alternative.

Comment:
The cumulative impacts analysis is cursory for the proposed action. The final environmental impact statement should identify spatially or temporally related projects and should address cumulative and indirect impacts, including all potential impacts that may be out of the control of the NPS. For each potentially affected species, the NPS should analyze not only the threats posed by visitation and other activities at the monument, but also the threats posed by other, range-wide factors occurring beyond monument boundaries. The NPS needs to study the relative importance of the Alamo Campground location to the endangered species, any cumulative adverse impact to the riparian and aquatic species found at and around Quitobaquito springs (such as the endangered pupfish), and a cumulative discus-

sion with respect to other endangered and declining species such as the Sonoran pronghorn, cactus ferruginous pygmy-owl, lesser long-nosed bat, Mexican rosy boa, and Sonoran desert tortoise.

Response:
The cumulative impact analysis contained in the Draft GMP/DCP/EIS and the Supplement was conducted pursuant to NEPA guidelines and includes consideration of all past, current and future known activities and the incremental addition of the actions contained in the general management plan. In the proposed action and in its biological assessment, NPS considered individual actions in the context of the larger range-wide issues for protected species and their habitat. Given the best available information and in consultation with the U.S. Fish and Wildlife Service, NPS has proposed actions and mitigation measures to minimize any adverse cumulative effects on protected species. The NPS is awaiting a formal opinion from the U.S. Fish and Wildlife Service and has included it with the biological assessment in Appendix A. Please also see page S-17 for a summarization of the Natural and Cultural Resources Management Plan, which addresses threatened and endangered species recovery plans.

Comment:
We believe the NPS should address here and now the environmental impacts of this general management plan, which is going to facilitate an increase in visitation to the monument and an increase in traffic on Route 85. In order for the plan to be adequate, the NPS should address these issues, analyze the many relevant impacts, and propose a reasonable range of alternatives for the public.

Response:
The NPS is not specifically proposing to increase visitation, but recognizes that visitation will increase over time. The general management plan is a vehicle to establish long-term management objectives, identify issues, and establish courses of action, including areas of further study, necessary to address these issues. The range of alternatives provides an opportunity to assess various options for meeting management objectives from a programmatic viewpoint. These alternatives are driven by NPS analysis of best available information, and where data is lacking, NPS acknowledges that it will obtain further studies prior to actual implementation. The development concept plans contained in the general management plan are just that—conceptual ideas for ways to implement NPS management objectives. The general management plan also recognizes that there are issues that must be addressed prior to actual implementation of any of these concepts. For this reason, the NPS has committed to collecting and considering all relative data when and if implementation plans for the campground, Quitobaquito, Twin Peaks, etc. proceed. NPS has also committed to conduct further environmental compliance for these areas as required by federal law; therefore, an environmental assessment would be prepared and would be available for public review prior to implementation of development decisions.

Comment:
The NPS must not postpone general management-level planning and analysis for the Highway for reasons of political expediency. It is not sufficient to say decisions would be delayed until the NPS has worked with other entities with their own missions and agendas especially since the plan envisions increased visitation to the monument, now and in the future, causing increased traffic along State Route 85 into the monument, along with a foreseeable increase in unrelated commercial traffic along State Route 85, passing to and from Mexico, through the monument.

Response:
The NPS has determined the proposed action to be the best course toward finding a truly effective solution to road-related issues. The proposed action states that the NPS would work and develop an agreement with Arizona Department of Transportation to gather data that would help the NPS determine what solutions are truly effective and what potential solutions would harm species more than protect them. Based on results of the studies, the NPS would work with ADOT to apply conservation measures to protect resources along the road corridor within the monument (see page S-21 of the Supplement). Based on available information, the biological assessment (see Appendix A) describes some prudent and reasonable measures for protecting species, including a driver education program. The biological assessment also shows that the current lack of data on what the true impacts of the road and traffic are on wildlife species and habitat, especially the Sonoran pronghorn, is the main deterrent in proposing more specific and effective solutions to these issues. Therefore, the NPS proposes to acquire this data.

Comment:
The plan does not analyze, quantify, or describe what impacts to wilderness values would occur from the noise and visual intrusions resulting from the anticipated increase in non-monumental traffic which the plan states would continue to be adverse, long-term and significant. In fact, there is no definition of "wilderness values."

Response:
The wilderness impact analysis contained in the Draft GMP/DCP/EIS and the Supplement was conducted pursuant to NEPA and includes consideration of all past, current and future known activities and the incremental addition of the actions contained in the general management plan. See page 64 in the Draft GMP/DCP/EIS for a definition of wilderness values. In addition, please refer to the impacts on wilderness sections for each alternative.

Comment:
The plan needs to address the persistent problems of exotic species introduction (for both flora and fauna), military overflights, and pesticide-herbicide drift into the monument from adjacent or nearby agricultural areas. The NPS should provide data and analysis of the current condition, with respect to these three issues, and the future foreseeable condition and alternatives to address them.

Response:
Please see the section on vegetation management, pages S-15 and S-16 of the Supplement and page 78 of the Draft GMP/DCP/EIS for a discussion on exotic vegetation. See also page S-19 for a discussion on integrated pest management. See also page S-15 of the Supplement; the Natural and Cultural Resources Management Plan addresses impacts from activities and land use outside the monument boundary which includes the issue of pesticide and herbicide drift. Please see page S-19 of the Supplement for discussion on aircraft overflight management.

State Route 85

Comment Letters: Defenders of Wildlife; Game and Fish Department, State of Arizona; Arizona Department of Transportation; J. and B. Fahn; petition letter, #P-1 (copies forwarded by A.E. Gay); comments from public meeting (PM)

Comment:
(Note: Most of the comments regarding State Route 85 in some way revolved about the confusion on what specific authority the NPS and the State of Arizona have on the road. Some of the specific comments are summarized here. While some of these comments are conflicting in nature — some wanting the NPS to increase speed limits, some wanting them decreased, and others saying NPS has no authority — our response attempts to fully explain what the NPS believes to be true regarding ownerships and authorities. Also, many comments referred to the road as "Highway 85". So as not to confuse discussions of this road with another Highway 85 in the State, the NPS continues to refer to the road as State Route 85.)

Who owns the road and can enforce laws or make changes on it such as widening, or adjusting the speed limit? The public needs to understand how the NPS interacts with the Arizona Department of Transportation (ADOT) and other agencies, with respect to State Route 85. The authority, or lack thereof, of the NPS to compel certain kinds of changes on or along this road must be explained to the public. What can the NPS do to stop widening of the road? Is there anything that can be said about granting the state the ability to widen the road more than the easement width? If the NPS is planning to charge an entry permit fee and restrict the speed limit, people will need to travel an extra 100 miles in Mexico to reach Rocky Point. Why not increase the speed limit to 65 mph? Conversely, there is no basis for the NPS decision to drop its original proposal to lower the speed limit nor its proposal to re-route the highway and/or discourage commercial traffic, given what the NPS presently knows about impacts to wildlife as a result of State Route 85.

Response:
Since there are no straightforward responses to these comments, the NPS discussed the legal status of SR 85 with its lawyers (solicitors). Based on these discussions and available information, the NPS believes the following to be true:

- State Route 85 was constructed by the Federal Public Roads Administration with federal funds, sometime after December 19, 1941.

- the monument was established before the road was constructed
- the 1941 Cooperative Agreement called for the State of Arizona and Pima County to take over maintenance of the highway after two years time
- a legal interest was never deeded to the State of Arizona or Pima County

Through the 1941 cooperative agreement, the State and the County assumed responsibility for maintaining the federally constructed road through the national monument, but the agreement does not give the State or the County an ownership interest in the road. Furthermore, based on a review of available historic maps and documents, the NPS believes that neither the State nor the County has a right-of-way for State Route 85 through the monument by virtue of a written instrument or under Revised Statue 2477. Therefore, the NPS believes that it may impose reasonable resource protection and public safety regulations on the road's use, including if necessary, establishment of speed limits, installation of speed bumps near developed areas, and designation of vehicle load, weight, or size limits. The NPS also believes that the State may not widen the road without Department of the Interior approval. Nevertheless, the NPS would like to continue to work with the State and the County to find mutually acceptable solutions to road safety issues and the road-related impacts as described in the proposed action and summarized in this document.

Comment:
How does the McLane-Ocampo Treaty affect the future of the road?

Response:
According to the Dictionary of American History, revised edition, volume IV, this treaty was ratified by Mexico, but not by the United States. Therefore, the treaty has no bearing on the use or management of State Route 85.

Comment:
What procedures has the NPS explored in an effort to reduce the impacts on monument resources? No alternative presents and analyzes a direct, immediate remedy to the ecological devastation the road is causing within the monument. Because of damage from the road contemporaneous with the increase in human visitation to the monument and in traffic along the highway, a more concrete discussion of potential solutions and a proposed course of action to the problem is needed.

Response:
The proposed action states that NPS would work and develop an agreement with ADOT to apply conservation measures to protect resources along the road corridor within the monument (see page S-21 of the Supplement). In addition, the proposal seeks to gather data that would help the NPS determine what solutions are truly effective and what potential solutions would harm species more than protect them. Based on available information, the biological assessment (see Appendix A) describes some prudent and reasonable measures for protecting species, including a driver education program. The biological assessment also shows that the current lack of data on what the true impacts of the road and traffic are on wildlife species and habitat, especially the Sonoran pronghorn, is the main deterrent in proposing more specific solutions to these issues.

Comment:
New pullouts are proposed in all alternatives. This is not a reasonable range of alternatives under NEPA. There also is no impact analysis or discussion of the consequent loss of habitat concerning these pullouts; the natural and wildlife resources present at those four locations is nowhere described. NEPA requires that the public be given site-specific analyses to comment upon.

Response:
Pursuant to NEPA a range of alternative actions was considered, and no pullouts are proposed in the Existing Conditions/No Action alternative. As described in the alternatives, the only place for visitors and people driving through the monument to pull over and stop is along the road shoulder; a situation that is both dangerous to humans and harmful to resources. Therefore, the NPS looked at alternatives of adding four, or five pull-outs in currently disturbed areas and assessed the impacts of these areas.

The size of the impacted areas has been factored into the analysis of impacts on soil, vegetation, wildlife, and threatened and endangered species and the location of the pullouts is shown on the corresponding alternative maps. For a general idea of the development concept of the larger pullouts — labeled as information portals — refer to the Lukeville DCP map in the Supplement; the smaller pullouts are about half of this size. Consistent

with NPS policies, additional environmental analysis would be prepared when the proposed actions begin to be implemented, which is when the more specific design drawings for each of these areas would be developed.

Comment:
There is no quantification of current traffic levels, projected future levels, average speeds, or the most important environmental element of all: the number of road-related deaths of sensitive and/or locally declining species, per year, or per relevant season, within the monument, as a result of State Route 85. Without such data, there can be no rational basis for the NPS' decision regarding this road.

Response:
Please see the biological assessment prepared by the NPS, and the formal opinion issued by the U.S. Fish and Wildlife Service in Appendix A. Information of road-related deaths is described in the Affected Environment section of the Draft GMP/DCP/EIS and the biological assessment.

Comment:
State of Arizona, Game and Fish Department is interested in participating in the proposed multi-agency work groups, such as those described for State Route 85 corridor planning efforts, and for the preparation of a wilderness management plan,

Response:
We have added the Game and Fish Department to the other agencies listed for these multi-agency efforts in the final general management plan.

Comment:
Arizona Department of Transportation wants to know NPS funding, timing, and details of all proposals related to State Route 85. Specifically, to what extent is motorist education being planned and implemented? What is the schedule for constructing underpasses on the highway? When will the monument change the wire on the right of way fence?

Response:
At this time, the NPS does not have funding, timing, or other details of the proposals. After a Record of Decision is signed, the NPS would work to develop the agreement with ADOT and begin to discuss these issues at that time.

Endangered Species Act

Comment Letters: Arizona Game and Fish Department; Environmental Protection Agency; Defenders of Wildlife; Public Meeting

GENERAL COMMENTS

Comment:
What, if any, NEPA and Endangered Species Act section 7(a)(2) compliance has been performed by the U.S. government with respect to the "perpetual easement" to Arizona's highway agency?

Response:
The responsibilities of the State of Arizona and Pima County to maintain the highway were established under a Cooperative Agreement reached in 1941, some time before enactment of either of these laws in 1969 and 1971, respectively. See the comments and responses in the State Route 85 category for additional information on the rights and responsibilities of the federal, state, and county governments in regards to the highway.

Comment:
Is visitation implicated in the decline of the Sonoran mud turtle, and has it impacted the desert tortoise, cactus ferruginous pygmy owl, Quitobaquito snail, Underwood's mastiff bat populations, and migrating neotropical birds like the endangered Southwestern willow flycatcher at Quitobaquito? If visitation is implicated in the decline of any of these species, the plan should provide a more comprehensive analysis of likely impacts to these species, and because

Quitobaquito Springs could be a potential water source for the Sonoran pronghorn, potential impacts to the pronghorn also should be addressed. The NPS should use every opportunity it can to recover listed species, include the results of Endangered Species Act Section 7 consultation with U.S. Fish and Wildlife Service, and assure the public it will implement activities outlined in any recovery plans under the lead of the U.S. Fish and Wildlife Service.

Response:
The Sonoran mud turtle population appears to have stabilized or is increasing. There is no indication that current levels of visitation are impacting the local desert tortoise population. The monument is currently contracting a study of desert tortoise, including establishment of long-term monitoring plots. Preliminary results (1995) indicate tortoise distribution and abundance at the monument are not remarkable (neither high nor low). The cactus ferruginous pygmy owl, Quitobaquito snail, and Underwood's mastiff bat are being studied (or surveyed for) at Quitobaquito. The effects of current levels of visitation are unknown. The pygmy-owl has only been recorded at Quitobaquito one time (park files); it has not been detected there in recent surveys (1994-1996). Dr. Robert Herschler is studying the Quitobaquito snail, and has raised no concerns regarding its current population status. Dr. Yar Petryszyn is studying Underwood's mastiff bat at Quitobaquito; at this time no site in the U.S. has yielded as many captures of this species as Quitobaquito. Because it uses the pond at night, interactions with visitors are essentially nonexistent. Effects of visitor use on the Southwestern willow flycatcher are not apparent and the species has never been recorded at Quitobaquito, although suitable stopover habitat exists. If the pond is allowed to fill in and become more marshy (to the detriment of the pupfish), a small patch of suitable nesting habitat may develop. Other neotropical migratory birds use Quitobaquito during migration. At this time, data is not available on Sonoran pronghorn use of the spring. However, if the pronghorn does utilize the spring it is most likely to occur at dawn, dusk or night, times when visitor use is very low to non-existent. Also, the pronghorn would approach from the more open west side which would not be affected by actions in the general management plan. However, before implementing the proposed actions for Quitobaquito, further environmental analysis will be conducted, including site specific design together with additional visitor use and wildlife surveys. If it is determined at that time that the implementation of the plan will have adverse impacts on this area, mitigation action would be taken.

Under current conditions, the health and vitality of these species at Quitobaquito are of concern, which is why the general management plan addresses these issues in a development concept plan to — explore options for meeting NPS management objectives of protecting sensitive resources and providing appropriate opportunities for visitor education and enjoyment. The general management plan is followed by various implementation plans, such as a Natural and Cultural Resource Management Plan, and further site specific planning and compliance. NPS proposals for the area must be conducted in consultation with the U.S. Fish and Wildlife Service and prior to implementation, all federal laws protecting these species must be adhered to.

The NPS has consulted with the U.S. Fish and Wildlife Service and has prepared a biological assessment that further analyzes the potential effects of the general management plan on federally listed species. Please see the attached biological assessment and formal opinion issued by the U.S. Fish and Wildlife Service, and page S-17 for a summarization of the Natural and Cultural Resources Management Plan, which addresses threatened and endangered species recovery plans. Before implementing actions at Quitobaquito, further environmental analysis will be conducted in consultation with the FWS, including site specific design, visitor use and wildlife surveys. If it is determined at that time that the implementation of the plan for the Quitobaquito area will have adverse impacts, appropriate mitigation actions would be taken.

Comment:
Who would train animals to go under bridges if they were built?

Response:
Wildlife underpasses have been shown to be effective at facilitating safe passage of cervids under highways, when designed and constructed with adequate openness. Constructing road underpasses for wildlife is just one strategy that has been explored for reducing the barrier that State Route 85 presents to wildlife. The NPS has consulted with the U.S. Fish and Wildlife Service on this and various other strategies. Please see the biological assessment prepared by the NPS and recommendations issued by the U.S. Fish and Wildlife Service in Appendix A.

QUITOBAQUITO DESERT PUPFISH

Comment:
The plan contains no method of preventing exotic fish introductions at Quitobaquito, and no analysis of the increased risk of such introductions, due to increases in human visitation to the monument. The plan only mentions one instance of predatory exotic fish being placed into Quitobaquito springs, but there have been others.

Response:
Introductions of exotics cannot be completely prevented, except perhaps with 24-hour surveillance. However, the monument conducts regular (once per six weeks) trapping sessions to sample for non-native fish, in addition to weekly visual inspections. The Natural and Cultural Resources Management Plan includes modification and expansion of the current monitoring program for the desert pupfish. Management objectives, based on existing legislation and the recent recovery plan for the desert pupfish, will be identified and the information acquired will guide protection and management actions affecting the species. In addition the Natural and Cultural Resources Management Plan calls for an integrated management plan for the Quitobaquito resource area. This plan would help to provide in-depth information status of resources at Quitobaquito including any introductions of non-native fish.

The additional information on exotic fish introductions have been added to page 73 of the Draft GMP/DCP/EIS as noted in the *Errata* section of this final environmental impact statement.

Comment:
Was an alternative considered to decrease the level of human visitation at Quitobaquito Springs, in order to decrease impacts on the pupfish's critical habitat and other resources? The more visitors there are to Quitobaquito, the more chances that exotic fish will be released into the springs, jeopardizing the pupfish. The plan contains no method for dealing with this problem, other than recommending additional "monitoring."

Response:
At this time, there is insufficient data as to whether visitation helps protect the pupfish, and if not, how many visitors is too many. One commentor (see Rosen letter), feels that the area and its resources would be better protected by increased use. Three of the alternatives including the proposed action call for a new, clearly marked trail system and increased public education to help limit potential user impacts on the area's resources. The New Ideas Alternative in the Supplement, page 39, proposed instituting mandatory permits or tours to manage and limit the numbers of visitors using this area. The New Proposed Action alternative defers the use of these types of controls and proposes to prepare a study to assess the human carrying capacity of this area, and assess alternative use strategies at that time.

SONORAN PRONGHORN

Comment:
No new alternative is proposed to specifically deal with the problem of State Route 85, as it relates to pronghorn recovery. The Supplement reveals that the NPS is not proposing in of the alternatives to re-route traffic, establish a toll road, construct a fee-collection station at the entrance, or reduce the speed limit along State Route 85 by 10 mph. The recovery of the Sonoran pronghorn pursuant to section 7(a)(1) of the Endangered Species Act requires the NPS to propose some kind of solution to the problem of the road within the boundaries of the monument. The plan cannot ignore or postpone the consideration of the immediate needs of the Sonoran pronghorn.

Response:
The NPS has consulted with the U.S. Fish and Wildlife Service and has prepared a biological assessment that further analyzes the potential effects of the proposed actions on federally listed and proposed species. The NPS examined eleven methods to decrease wildlife-vehicle accidents and facilitate safe passage across highways and listed proposals to help reduce the impact of State Route 85 on pronghorn. Please see the biological assessment and formal opinion issued by the U.S. Fish and Wildlife Service in Appendix A of this document, and page S-17 in the Supplement for a summarization of the Natural and Cultural Resources Management Plan, which addresses threatened and endangered species recovery plans.

Comment:
Will increased visitation impact the species? The problem under NEPA and the Endangered Species Act, is that the agency is postponing its study of the State Route 85 problem while presently moving forward with plans to accommodate increased visitation — visitation that will utilize that highway as well as habitat areas on the western side of the monument where pronghorn occur. In addition, no analysis is provided of potential impacts from increased human visitation, in the form of recreational use of certain trails, roads, and campgrounds, to Sonoran pronghorn recovery.

Response:
The NPS is not specifically proposing to increase visitation, but recognizes that visitation will increase over time. The general management plan is a vehicle to establish long-term management objectives, identify issues, and establish courses of action, including areas of further study, necessary to address these issues. Threatened and endangered species recovery is part of the monument's Natural and Cultural Resources Management Plan as summarized in the Supplement. The biological assessment includes a discussion of the NPS commitment to developing and implementing a monitoring program for the pronghorn. As stated in the biological assessment, the NPS would monitor visitor use and restrict access where necessary to reduce potential for adverse impacts on pronghorn resulting from increased visitor use in front-and back country areas of the monument.

Comment:
Long-time Ajo residents reported seeing more Sonoran pronghorn near Ajo and south in the Valley of the Ajo, in past years. The 1994 Pronghorn Recovery Plan states that observations of pronghorns were supposedly not uncommon along State Route 85. This Recovery Plan states that, in order for this species to recover, it will have to re-occupy more of its historic range and/or increase its utilization of its current range. One of the main recommendations of the plan is modification of highways so that pronghorn may gain access across them; State Route 85 seems to be preventing the endangered Sonoran pronghorn from utilizing available habitat on the eastern half of the monument, fragmenting the Sonoran desert ecosystem into disjunct western and eastern hemispheres. The plan also recommends that federal agencies minimize human disturbance, including disturbance from recreational usage.

Response:
Threatened and endangered species recovery is part of the monument's Natural and Cultural Management Plan as summarized in the Supplement. The biological assessment in Appendix A, includes a discussion of the NPS commitment to develop and implement a monitoring program for the pronghorn. The NPS examined eleven methods to decrease wildlife-vehicle accidents and facilitate safe passage across highways and listed proposals to help reduce the impact of State Route 85 on pronghorn. As stated in the biological assessment, the NPS would monitor the impacts of visitor use and restrict access where necessary to reduce potential adverse impacts on pronghorn resulting from increased visitor use.

LESSER LONG-NOSED BAT

Comment:
What lesser long-nosed bat experts and bat biologists have been consulted and what have they said about the Alamo campground expansion?

Response:
Together with experts on staff, we have consulted with the U.S. Fish and Wildlife Service on the lesser long-nosed bat. The NPS has entered into formal consultation with the U.S. Fish and Wildlife Service and has prepared a biological assessment which analyzes the potential effects of the proposed action on federally listed and proposed species, including the bat. See the attached assessment and subsequent formal opinion issued by the U.S. Fish and Wildlife Service contained in Appendix A.

Comment:
How important is this adit and the foraging area that surrounds it to the survival and recovery of the bat, range-wide? The Supplement also should provide any available data or analysis regarding the frequency or intensity of previous disturbances to the adit and the impacts those previous disturbances have had upon the bats therein. Is this adit a

source of dispersing bats for other areas? The campground location is important and studies need to be conducted before human visitation can be increased.

Response:
The adit and the surrounding foraging area are very important, on both counts. This is still the largest known maternity colony of the lesser long-nosed bat in the U.S., although one of almost ten times this size is known in the Pinacate Preserve in Sonora, Mexico. Under contract with the U.S. Air Force, Dr. Virginia Dalton and Dave Dalton determined that the Copper Mountain bats forage widely, but probably stay within about 20 miles of Copper Mountain. We suspect these *Leptonycteris* move east in late summer/early fall to feed on agaves blooming at higher elevations, e.g. in Cochise County, AZ.

The Copper Mountain bat roost/adit, which is visible from the Alamo road and campground, is inspected inside and out by park staff, approximately once every two weeks through the bat season (April-September). In the past five years, monument staff have suspected only three or four unauthorized entries, and disturbance of the resident bats was detected only once in 1995, when barn owls were found nesting in the adit and preying heavily on the bats. After consultation with the U.S. Fish and Wildlife Service and Arizona Game and Fish Department, the owls were removed. It was the presence of barn owls, not trespassing humans, which initiated the investigation of grating as a protection measure.

Comment:
What impacts might there be from additional human beings visiting the adit even if they are prevented from physically entering the adit? What if hikers shout into the adit, to get an echo? What if they bring a radio to the site? What if they throw rocks or trash such as cigarettes through the grates? Can the NPS assure these bats will remain unmolested?

Response:
If humans do not enter the adit, we foresee no significant impacts. Currently, barbed-wire fence and warning signs are used to exclude humans. The evidence is that these are almost totally effective.

The maternity chambers are about 300 feet inside the adit, with bends in the approach. Sound does not penetrate the adit far. Even low-flying aircraft and sonic booms were found not to disturb the bats in the roost (Dalton 1994, report to U.S. Air Force). Rocks or trash have also not been found to have an effect on bats. This may be because of the angle, since someone couldn t throw anything further than 40 or 50 feet into the adit, and that littering is a fineable offense within all units of the National Park. To date, no flammable material has been present in adit openings; guano concentrations begin about 250 feet inside.

Since the mine adit is closed to all visitor use, the area around the mine adit is closed to overnight use, and current human visitation is not impacting the bats, the NPS finds no reason to further restrict visitor use in this area.

Comment:
What impacts might there be from additional human beings camping within the nighttime foraging range of the bats? Will vegetation the bats depend upon be degraded by the visitors? What vegetation is likely to be impacted by the increased human presence, and to what extent do the bats utilize that vegetation?

Response:
The NPS believes there would be no discernable impacts from a maximum increase of 16 additional people camping in the area (each of the four sites allows a maximum number of four people per site). Monument Resources Management staff frequently hear *Leptonycteris* foraging at adjacent cacti while they are carrying out a variety of nocturnal summer projects (Tibbitts, Conner, Pate personal communication). *Leptonycteris* are also often observed drinking at tinajas while two to four humans sit quietly several yards away. If humans wish to maliciously harass bats as they forage, this could be probably be accomplished, although would be a finable offense. However, the addition of four campsites is not seen to increase this risk.

The only impact to the vegetation bats depend on would be if any columnar cacti are removed, or prevented from growing in the future, in the footprint of the four additional campsites. The NPS does not locate campsites near columnar cacti since they present a safety hazard if they fall on a tent. The total footprint of the campsites would amount to approximately 0.1 acre out of perhaps over 500,000 acres being used by the Copper Mountain colony.

Comment:
Will campfires or visitor noise cause the bats to avoid essential areas they need? Will there be an increased risk of fire, litter, air pollution, noise pollution, or resulting predators in the campground that could impact the bat or its food source? Is there a perceptible difference in the likely impacts to the bat, depending on the number of human visitors in the campground?

Response:
We see no mechanism by which human use at the campground would affect bats or their predators (barn owls) two miles away at Copper Mountain. We have no indication that fires (permitted only in existing grates) at Alamo Campground would exclude bats from essential areas. An increased risk of fire is not expected. Open fires are not permitted, are easily detected and in the past, have not been a visitor use problem.

We believe there would be a very minor and insignificant increase in air pollution, noise, or possible litter, since the number of sites would only increase from 4 to 8. To date, Alamo Campground has attracted visitors seeking a pristine, quiet, and primitive experience, and the NPS believes this would continue as the expansion is relatively small.

Comment:
Is there any available data on human disturbance impacts to other lesser long-nosed bat colonies in the Southwest, or bat colonies in general?

Response:
We have proceeded under the assumption that human disturbance at Copper Mountain would be detrimental and all evidence indicates that current measures, in combination with the dangerous look of the adits, are effective at precluding human trespassing, and therefore, disturbance. We have collected some information from other areas in this regard, and have used this together with other available data and professional experience to assess the impacts of the proposed actions. We are aware that the U.S. Fish and Wildlife Service is recommending that the U.S. Forest Service not route a section of the Arizona Trail near a roost cave. However, we have not reviewed all the data and thinking behind that particular issue.

Comment:
We support having bat grates at the mine adit to protect the maternity colony of the endangered lesser long-nosed bat.

Response:
There is a professional difference of opinion on the use of bats grates as a protective measure. While originally, the NPS believed that installation of the grates would protect the species, it has since learned that these grates may actually have an adverse affect on bats. The biological assessment (Appendix A) does not recommend bat grates, however, the NPS will follow the recommendations from the U.S. Fish and Wildlife Service on this matter, which is presented in their formal opinion also presented in Appendix A.

CACTUS FERRUGINOUS PYGMY-OWL

Comment:
What cactus ferruginous pygmy owl experts, or other owl experts have been consulted and what have they said about the Alamo campground expansion?

Response:
Together with experts on staff, we have consulted with the U.S. Fish and Wildlife Service on the pygmy-owl. The NPS has entered into formal consultation with the U.S. Fish and Wildlife Service and has prepared a biological assessment which analyzes the potential effects of the proposed action on federally listed and proposed species. See the attached assessment and subsequent formal opinion issued by FWS contained in Appendix A.

Comment:
The NPS states that the last known occurrence of cactus ferruginous pygmy-owl was in 1993. We request that this information be updated to include two observations from 1995 and three observations from 1996, as identified by monument staff.

Response:
Please see the biological assessment in Appendix A which contains the most current pygmy-owl information, and the subsequent formal opinion issued by the U.S. Fish and Wildlife Service.

Comment:
What surveys have been conducted by the NPS to locate this owl near the campground. How important is the area around Alamo Canyon campground for its survival and recovery? The plan should provide analytical support for the assertion that the proposed campground expansion is not expected to have an adverse effect on the Cactus ferruginous pygmy-owl or its critical habitat.

Response:
The monument's survey data have not been compiled into a draft report at this time. Since November 1994, Alamo Canyon campground and road have been surveyed approximately eight times; one probable pygmy-owl and one possible pygmy-owl were detected. A park visitor also reported hearing one pygmy-owl along Alamo Road.

The NPS believes the campground area is fairly important to this species since it is one of the few locations in Arizona where the bird has been seen repeatedly in the past 20 years. Since the expansion would remove up to .1 acre of Sonoran desertscrub vegetation — the owl's habitat — from within the boundaries of proposed critical habitat, the NPS has entered into formal consultation with the U.S. Fish and Wildlife Service. The NPS has prepared a biological assessment which analyzes the potential effects of the proposed actions on federally listed and proposed species. Please see the biological assessment, which contains the updated pygmy owl information, and the subsequent formal opinion issued by the U.S. Fish and Wildlife Service contained in Appendix A.

Comment:
Will the presence of additional visitors during the night or during the day, harm the owl? Are there pygmy-owl studies, conducted elsewhere in the Southwest, that might shed light on the issue of human disturbance?

Response:
The NPS does not believe the presence of visitors will harm the owl. The pygmy-owl is so rare, there have not been enough to constitute an adequate study population. However, there are anecdotal suggestions that pygmy-owls tolerate human presence fairly well. Many records are from low-density residential areas, from the 1880s in Phoenix, to 1996 in the residential loop in the monument. The overall pygmy-owl literature (summarized in the U.S. Fish and Wildlife Service 1993 listing proposal) often describes the pygmy-owl as bold around people.

Comment:
The NPS should provide a comparative analysis enabling the reader to compare the impacts of night time closure (per the New Ideas Alternative) versus the impacts of allowing or expanding overnight use (per the New Proposed Action Alternative). Since the proposed campground expansion could result in the presence of twice as many campers at dawn and dusk, the NPS should do a more thorough analysis of the potential adverse impacts to nighttime species such as the endangered bat and owl.

Response:
The Summary Comparison of Alternatives and Summary Comparison of Consequences tables on page s-vi through page s-xxxiv in the Supplement present a comparative analysis of the alternatives and environmental consequences.

The NPS has entered into formal consultation with the U.S. Fish and Wildlife Service and has prepared a biological assessment which analyzes the potential effects of the proposed action on federally listed and proposed species. See the assessment and the formal opinion issued by the U.S. Fish and Wildlife Service in Appendix A.

Comment:
Are there other areas of the monument where the Alamo Canyon campground or trail could be re-located without such a severe potential impact on an endangered species?

Response:
There are no other areas of the monument where the Alamo Canyon campground or trail could be relocated. A majority of the land base is congressionally designated Wilderness, where this type of campground is inappropriate. Where possible, NPS policies direct new developments to currently disturbed areas in order to avoid disturbing new land and potentially increasing affects on threatened and endangered species.

MEXICAN ROSY BOA

Comment:
The NPS should propose a solution to the impacts from State Route 85 in order to protect and recover the rosy boa. The final environmental impact statement should discuss arrangements that NPS has made with the Arizona Department of Transportation (ADOT) regarding the possibility of modifying the highway or implementing a driver education effort, particularly in the area of the Mexican rosy boa habitat, in order to reduce the rate of mortality caused by the reptile crossing the road.

Response:
The Supplement states that NPS would work with ADOT to apply conservation measures to protect resources along the road corridor within the monument (see page S-21 of the Supplement). The biological assessment also lists prudent and reasonable measures for protecting species including a driver education program. See the biological assessment in Appendix A.

Comment:
The plan needs to provide an adequate impact analysis of potential impacts to the Mexican rosy boa from increased visitation to the monument as well as increased use of roads and highways, including Highway 85.

Response:
The general management plan is a vehicle to establish long-term management objectives, identify issues, and establish courses of action, including areas of further study, necessary to address these issues. The range of alternatives provide an opportunity to assess various options for meeting management objectives from a programmatic viewpoint. Pursuant to NEPA, these alternatives are driven by NPS analysis of best available information, and where data is lacking, the NPS acknowledges that it will obtain further studies prior to actual implementation.

Increasing traffic appears to have negative effects on the rosy boa. Mortality rates for snakes along State Route 85 is severe in the monument with a minimal estimate of 500 various species of snakes killed per year. During a four year study from 1987 to 1992, the Mexican rosy boa was not found on the State Route 85 study transect. Based on the results of this study, it appears that the rosy boa has been extirpated from some parts of the monument along State Route 85.

Comment:
Where does the rosy boa occur in the monument? Are visitors frequenting or impacting other locations occupied by the rosy boa? Will those areas receive management attention? Are any of the proposed pullouts in rosy boa habitat?

Response:
The rosy boa could be encountered in any rockpile habitat, and adjacent gently sloping bajadas, in the monument. Because they are numerous, it can be assumed that there are visitors in these areas. By inclusion in the monument these areas receive management attention. None of the proposed pullouts are proposed in prime rosy boa habitat, although there is no guarantee that the species will not be present since this species could be almost anywhere in the monument.

ACUNA CACTUS

Comment:
The plan needs to provide an adequate impact analysis of potential impacts to the Acuna cactus. Is the NPS monitoring human visitation to cactus locations?

Response:
The NPS has not directly monitored human visitation in cactus locations. However, the monument probably has some data on the number of vehicles using the North Puerto Blanco Drive, which would be an indicator. The population of the Acuna cactus is the subject of an exhaustive demographics study, which annually records locations and identifies the number of plants that have disappeared. Some of these are suspected to have been poached. At least one pullout has been closed, because it was within the Acuna cactus population.

Air and Water Resources

Comment Letters: Environmental Protection Agency; Defenders of Wildlife; Gu-Vo District and Hia-Ced O'odham Program

Comment:
We recommend that the NPS provide greater detail on the impacts to the monument resulting from agricultural drawdowns in the Rio Sonoyta watershed and take affirmative action to resolve the severe problem of aquifer depletion below Quitobaquito springs, by communicating with the government of Mexico on the issue of groundwater pumping in the Sonoyta Valley and participating in the NAIII'A or BECC environmental processes. Please discuss possible agreements and actions that can be taken to reduce these impacts to water systems inside and outside the monument. The water resources inventory should be included in the final environmental impact statement or subsequent NEPA document.

Response:
The monument staff has been working and will continue working with resource personnel in Mexico to address water and land use issues in the Sonoyta Valley. Please see pages S-16 and S-17 of the Supplement summarize the water resources section of the Natural and Cultural Resources Management Plan. In addition, please refer to the *Impacts on Floodplains, Wetlands, and Water Resources* sections in both the Draft GMP/DCP/EIS and the Supplement.

Comment:
The NPS should develop and implement a storm water pollution prevention plan containing Best Management Practices prior to commencing any construction.

Response:
Appendix I of the Supplement outlines mitigation measures that would be used before any specific action is implemented.

Comment:
We recommend that the NPS elaborate on the water conservation program and the groundwater studies being performed at the monument now. The water conservation program should be outlined and a commitment to implement it should be stated in the final environmental impact statement. We urge the Park Service to provide the public with the data supporting its conclusion that there would only be a slight to moderate increase in water consumption over existing levels following implementation of conservation measures, as well as a detailed agenda of the water conservation measures it intends to develop and implement. In the plan, the NPS should clarify consideration of indirect and cumulative water use in the Sonoran Desert, including areas in the immediate vicinity of the monument such as Ajo, Why, Lukeville, and Sonoyta, Mexico. With NAFTA and the increase in facilities at the monument (and with the monument changing from a monument to a national park with more prestige), cumulative water use in the monument and in areas around it is sure to increase, and should be quantified.

Response:
The general management plan is a vehicle to establish long-term management objectives, to identify issues, and to establish courses of action, including areas of further study, necessary to address these issues. During the

general management planning process, a number of issues were identified which will require further analysis and planning — which is precisely the purpose of a programmatic planning process. The general management plan is conceptual in nature — it attempts to address known issues given NPS management objectives, but also identifies other issues which will require more detailed study should implementation plans proceed.

The NPS has committed to developing a water conservation program as stated in the Supplement page S-17 and S-80. The NPS will utilize existing expertise by working with consultants from the NPS Water Resources Division and outside specialists, such as the Phoenix and Tucson City Water Conservation Departments, to implement a program to suit the monument's specific needs.

As referenced in the Natural and Cultural Resources Management Plan summarized in the Supplement, both internal and external impacts on water resources in the monument are currently being studied and would continue. Groundwater resources, surface water, land use, trends in water use, land subsidence, and characteristics of regional aquifer and the Rio Sonoyta watershed would be studied. Study plots would be established to help evaluate the effects of water drawdown from agricultural uses.

Comment:
What is the monument doing to address and prevent air pollution from Mexico? What is the Aircraft monitoring and management program? Also, the International Water Assessment proposed in the Supplement should include other agencies such as IBWC and Mexican counterparts.

Response:
The park would continue to work with resource managers from Mexico. To protect air resources in the park, the NPS would recommend to the Arizona Department of Environmental Quality that the park be reclassified from a class II designation to a class I airshed as identified in the Clean Air Act of 1977. Having a class I designation would offer the highest level of protection for the monument's air quality related values such as visibility. Programs would be developed to monitor ambient air quality and visibility in the monument. Please see page S-17 and S-18 of the Supplement.

The Aircraft monitoring and management program involves monitoring overflights, assessing the impacts of overflights on monument resources and the visitor experience, and working with the military to reduce these impacts. See page S-19.

We agree that the International Water Assessment proposed in the Supplement should include other agencies such as IBWC and Mexican counterparts.

Soils, Vegetation, and Habitat Resources

Comment letters: Defenders of Wildlife

Comment:
The plan needs to clarify how many acres of Sonoran Desert habitat will be lost or otherwise disturbed by the proposed action. Was a thorough analysis, including indirect and cumulative analyses, of this habitat loss conducted under the alternatives presented in the plan and supplement? It is also unclear whether revegetated areas, or areas restored to natural conditions, truly can compensate for the habitat values of the land that will be lost. Will any particular species end up losing habitat, on a net basis, that they prefer?

Response:
Please see the discussions of vegetation and soil impacts for each alternative as well as the *Summary Comparison of Consequences* table in the Supplement (page s-xv). Impacts on habitat are also discussed under the *Impacts on Floodplains, Wetlands, and Water Resources, Impacts on Threatened, Endangered and Sensitive Species,* and *Impacts on Wildlife* sections for each alternative. The proposed development disturbance and revegetation efforts would result in a net increase in Sonoran Desert habitat. Proposed development disturbance would be located within areas of existing development or previous disturbance and would involve relatively small tracts of land surrounded by larger areas of undisturbed habitat. Revegetation efforts would be directed toward recreating like habitat that had been disturbed, consequently there would not be a significant loss of habitat.

Comment:
The plan should analyze in more detail and on a site-specific basis, potential increases in surface erosion resulting from the increased human visitation to the monument.

Response:
These impacts were assessed pursuant to NEPA. Please see pages 67, 69, 113-115 of the Draft GMP/DCP/EIS and pages S-87 through S-89 and Appendix 1 of the Supplement for a discussion on soils and soil erosion.

Tohono O'odham and Hia-Ced O'odham Consultations and Relationships

Comment Letters: The Traditional O'odham Leaders of the Traditional O'odham in Mexico; Gu-Vo District and Hia-Ced O'odham Program; Bureau of Indian Affairs, Papago Agency; Environmental Protection Agency

Comment:
The Gu-Vo District of the Tohono O'odham Nation requests more time to review the final draft before it is submitted for final approval and that a cooperative arrangement be established between the Gu-Vo District and Organ Pipe Cactus National Monument.

Response:
Upon its completion, the final environmental impact statement will be distributed to the Gu-Vo District, the public and the other agencies involved. There is a 30 day no-action period following its release. As noted on page S-5 of the Supplement, the Record of Decision, which constitutes the final approval needed to implement the general management plan, will not be signed for at least 30 days following the notice in the Federal Register announcing the availability of the final document. The NPS will continue to consider any concerns expressed during this time.

The NPS is interested in continuing to improve relations with the Tohono O'odham Nation, including its most immediate neighbors the Gu Vo District and the Hia-Ced O'odham. Several comments expressed confusion at understanding what the NPS was actually proposing to do. Therefore in this document, the proposed action has been rewritten and is presented at the beginning of this document.

As described in the general management plan, the NPS seeks to establish a government-to-government agreement with the Tohono O'odham Nation. The NPS would hope that the Gu Vo District would be involved in the development of the agreement since the NPS hopes to establish and improve communications.

Comment:
Can the Tohono O'odham and Hia-Ced O'odham be assured of free, uninhibited access to sacred sites to continue traditional cultural and religious practices? Will NPS policies affect use and protection of cultural landscapes or O'odham Holy Land?

Response:
The NPS assures the Tohono O'odham and the Hia-Ced O'odham that our long-standing policy will continue of free, uninhibited access for the O'odham to their sacred sites and other traditional-use areas within the monument. This policy is supported and encouraged by several federal laws and executive orders, such as Executive Order 13007 of May 24, 1996, protecting accommodation to sacred sites (see Appendix D); the Presidential Memorandum of April 29, 1994, requiring government-to-government consultation (see Appendix D); and the National Historic Preservation Act of 1966 (Public Lay 89-665), as amended, in 1992 (Public Law 102-575) providing for Native American consultation and confidentiality of cultural information.

Comment:
The O'odham of Mexico state that the Organ Pipe Cactus National Monument is part of their aboriginal lands. The Gu-Vo District and Hia-Ced O'odham ask the NPS to re-consider establishment of an O'odham community in the Quitobaquito area.

Response:
As stated on page S-12 of the Supplement, responsibility for the management of all lands contained within Organ Pipe Cactus National Monument is an inherent federal responsibility authorized by President Franklin D.

Roosevelt on April 13, 1937 (Presidential Proclamation 2232), which cannot be delegated to the Tohono O'odham Nation or any other O'odham unless directed otherwise by the President or Congress of the United States. As stated on page S-13 of the Supplement, the NPS believes that establishment of a community at Quitobaquito would be in violation of the Endangered Species Act and Wilderness Act, and therefore is not proposing this idea. However, the NPS is working to increase the involvement of the O'odham in this important, sacred area.

Comment:
We recommend implementation of the April 29, 1994 memorandum of President William J. Clinton, Government-to-government Relations With Native American Tribal Governments.

Response:
As mentioned above in another response, the NPS is required to and will continue to implement this memorandum and all executive orders of the President of the United States and laws of the Congress of the United States. A copy of this memorandum is included in Appendix C.

Comment:
How will the NPS comply with Native American Graves Protection and Repatriation Act (NAGPRA)?

Response:
The NPS is the lead federal agency in developing regulations for implementing NAGPRA of 1990 (Public Law 101-601). The Final Regulatory Rule on implementation was published in the Federal Register on December 4, 1995. As required, Organ Pipe Cactus National Monument has inventoried its holdings, which are curated at the Western Archeological and Conservation Center of the NPS in Tucson, Arizona. Two items have been determined subject to this law and the relevant regional Native American tribes have been notified. Further consultation with them is expected as the process of repatriation continues.

Comment:
How will the NPS handle management of indigenous knowledge, including its collection, NPS use of, and dissemination to others?

Response:
The NPS appreciates indigenous knowledge and how it can be applied to natural and cultural resources management and interpreted to visitors, when appropriate. We realize that the relevant indigenous peoples strictly control such cultural knowledge and will determine when it is appropriate to disseminate it to non-native Americans as part of its governmental functions. For protection of this information, federal laws provide for withholding from the public cultural resource site locations. Most recently, Section 304 of 1992 amendments (Public Law 102-575) provides for restricting information about site locations and associated cultural information about archeological, ethnographic, and historic sites. The NPS recognized that the relevant tribal governments, in a government-to-government relationship, should have access to all public information relating tot he environmental planning, in the case of Organ Pipe Cactus National Monument. The NPS, consistent with Section 106 of the National Historic Preservation Act of 1966, as amended, and other laws, regulation, and policies, will continue to inform and consult with the Tohono O'odham Nation during discussions of cultural, archeological, and other resource issues; when administering archeological surveys, mitigation, or monitoring; and when a discovery situation occurs. As proposed in the Supplement, the acquisition, application, and sharing of indigenous knowledge as well as the sharing of environmental, planning, and scientific resource management information can be discussed as part of the government-to-government agreement being sought between the NPS and the Tohono O'odham Nation.

Comment:
Consultations should be available based on traditional practices and according to the O'odham time table, not institutionalized in an agreement.

Response:
The NPS appreciates cultural differences and does its best to honor them whenever possible in consulting with Native Americans. The institutionalization of agreements is handled according to local wishes on a case-by-case basis.

Comment:
The Gu-Vo District of the Tohono O'odham Nation requests more information and full participation in the Ecological Monitoring Program.

Response:
Copies of recent reports on the Ecological Monitoring Program have been sent as requested. Levels of participation and involvement in this program are subject to discussion and could be included in the government-to-government agreement clarifying future Tohono O'odham and Hia-Ced O'odham involvement in various programs in the monument.

Comment:
Tohono O'odham should be hired to participate at all levels of the monument's program and should be on-site at all public facility locations. The interpretation of Tohono O'odham history, culture, and language should be controlled and conducted by the O'odham. Trail signs and other informational documents should be written by O'odham, first in the O'odham language, followed by Spanish and English.

Response:
As mentioned in a previous response, the NPS has a continuing, inherent federal responsibility to manage the lands of Organ Pipe Cactus National Monument under federal laws, regulations, and policies. The monument will continue to attempt to recruit O'odham employees. In addition, the government-to-government agreement called for in the proposed action will attempt to increase O'odham involvement in interpretation and other park programs. The NPS believes O'odham concerns, comments, and values need to be taken into consideration in future interpretation and resource management plans in the monument.

Cultural Resource Preservation

Comment Letters: The Traditional O'odham Leaders of the Traditional O'odham in Mexico; Gu-Vo District Chairperson and Supervisor Hia-Ced O'odham Program; Superintendent, Papago Agency, Bureau of Indian Affairs; Environmental Protection Agency

Comment:
The Traditional O'odham in Mexico want the right to manage their cultural resources and indigenous knowledge relating to the monument, to identify sacred sites and traditional use areas, and to determine policies for protection and visitor avoidance. Mitigation is not sufficient to the management of significant cultural, sacred and religious sites.

Response:
As mentioned in a previous response, the NPS has a continuing, inherent federal responsibility to manage the lands of Organ Pipe Cactus NM under the federal laws, regulations, and policies of the United States. The monument has willingly shared and exchanged information about management of sacred sites and tradition use areas with the O'odham. It will continue to do so as part of its good-neighbor policy with Mexico and its government-to-government relationship with the Tohono O'odham Nation and as part of its obligations.

Comment:
The Tohono O'odham Nation requests the NPS conduct anthropological research to establish the affiliation of the Tohono O'odham and Hia-Ced O'odham to the monument.

Response:
The monument's Natural and Cultural Resources Management Plan calls for the continuing study of ethnographic and ethnohistorical data on the indigenous peoples who once inhabited and frequented what is now Organ Pipe Cactus National Monument. If desired, the Tohono O'odham Nation could include coverage of these topics in future discussions on the agreement between the NPS and the Tohono O'odham Nation.

Comment:
The NPS should ensure that the Tribal governments have access to all public information relating to the environmental planning of the monument. The Tohono O'odham and Hia-Ced O'odham should always be informed and consulted

during discussions of cultural and archaeological resources issues, when administering archeological surveys, mitigation, or monitoring, and when a discovery situation occurs, not just "when appropriate" as the document states.

Response:
The NPS will continue to comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and other laws, regulations, and policies. The NPS will continue to consult regularly, both formally and informally in the monument and on the reservation.

Comment:
NPS should notify Tribal governments of proposed trail alignments and developments well in advance of construction so that Tribes have ample opportunity to notify the NPS of the suitability of the alignment.

Response:
The NPS will continue to comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and other laws, regulations, and policies regarding consultation with the Tohono O'odham Nation. Suitability of proposed trail alignments and developments will continue to be part of ongoing consultations.

Visitor Use Numbers

Comment letters: Defenders of Wildlife; U.S. Environmental Protection Agency

Comment:
The plan does not adequately present and analyze current visitation data for the monument, and for particular locations therein, nor does it project future visitation data and analyze the environmental impacts thereof.

Response:
Please refer to page 90 and Appendix F of the Draft GMP/DCP/EIS for recent visitor numbers. Also refer to *Impacts on Visitor Use and Experience* sections of the Draft GMP/DCP/EIS and the Supplement. The biological assessment in Appendix A of this document also contains some visitation data. Further visitation data for particular locations throughout the park do not exist.

Comment:
The final environmental impact statement should contain a detailed discussion of what the numbers mean that are presented in the carrying capacity table located in the Appendix to the Supplement.

Response:
Existing use capacities in Appendix H of the Supplement restate the monument's closures and public use limits as contained in the Code of Federal Regulations (CFR). At this time, these numbers represent the human carrying capacities for the monument. The Appendix contains a list of closed areas in the non-wilderness, where public use is not allowed due to safety or the need to protect resources. Under section 2.10 CFR, limits on use of the non-wilderness campgrounds are also described. For example, in the main campground, at most one recreational vehicle or two automobiles are allowed, and for campsites, the maximum site occupancy is six people. These numbers were set based on available information and professional experience.

Many of the numbers contained in this Appendix represent use limits on overnight use in the Organ Pipe Cactus Wilderness. The wilderness was separated into different backcountry camping zones. The number of parties allowed to spend the night (listed under carrying capacity), and the greatest number of people allowed in each party (listed under largest party size) are then described for each zone. Monument staff uses these numbers to determine the maximum number of permits to be issued for every area since a permit is needed to camp overnight in the wilderness. In addition to the numbers set, each party is allowed to stay: not more than 14 total days in the wilderness, not more than two consecutive nights at any one specific location, a minimum of ½ mile from any historic site or water source, and must carry out all trash and comply with sanitation regulations to deal with human wastes. The numbers and regulations were set based on available information and professional experience in order to protect resources and to comply with the Wilderness Act.

Based on NPS staff's knowledge of the area, day use in the wilderness is generally low so day use levels have not been established for these areas. However, gathering better estimates of actual day use levels and establishing

some maximum limit on day use in some areas is proposed by this general management plan as part of a subsequent wilderness management plan which the NPS hopes to do in concert with the U.S. Fish and Wildlife Service, the Bureau of Land Management, and others.

Comment:
Baseline data comparing particular visitation levels to particular levels of environmental degradation should be included in the Supplement so there can be a rational basis for making determinations of "no adverse effect" or "no significant adverse effect." Prior to expanding visitation, as proposed in this plan, the NPS should analyze all the likely impacts of its proposals and mitigate for significant impacts.

Response:
The NPS is not proposing to expand visitation in the general management plan, but does anticipate that visitation will increase over time. The general management plan identifies all known issues and establishes what additional work, studies, design plans, etc. are necessary prior to implementation of the final plan. It also establishes what mitigation measures would be useful in reducing the level of impacts. During the design phase, as additional site-specific data is collected and analyzed and alternatives are further explored, mitigation measures are further refined to meet all applicable laws and requirements. The public will have an opportunity to comment on these site-specific designs and mitigation measures since environmental assessments will be prepared in the future.

Alamo Canyon Campground

Comment Letters: Defenders of Wildlife

Comment:
The Supplement should have more basic, baseline information on current usage of Alamo Canyon Wash Campground and identifiable visitor impacts on the lesser long-nosed bats there. The public should have an opportunity to comment on the campground expansion, while it is considering the programmatic, big picture of management at the monument, with solid scientific data concerning the cactus ferruginous pygmy-owl as well as the bat. The NPS should conduct a monitoring program and collect data on the demographics, behavior, and habitat requirements of these species now, prior to campground expansion, to enable the agency to gain a better understanding of the species' tolerance of humans and help determine the appropriateness of the Alamo campground expansion.

Response:
Please refer to page S-91, first paragraph for visitation at Alamo Canyon Wash Campground. The purpose of the general management plan is to provide a general management direction and program. As such, it has identified a number of issues that must receive attention over the near future and has established potential ways to address these issues. The development concept plans (DCPs) contained in the general management plan are just that — conceptual ideas for ways to implement NPS management objectives. The DCP also recognizes that there are issues that must be addressed prior to actual implementation of any of these concepts. For this reason, the NPS has committed to collecting and considering all relative data when and if implementation plans proceed for the campground, Quitobaquito, Twin Peaks, and other projects. The NPS has entered into formal consultation with the U.S. Fish and Wildlife Service and has prepared a biological assessment which analyses the potential effects of the proposed actions on federally listed and proposed species (see Appendix A). The NPS has also committed to conduct further environmental compliance for these areas as required by federal law; therefore, an environmental assessment would be prepared and be available for public review prior to implementation of development decisions.

Comment:
Why is the NPS proposing four new campsites? Why not fourteen, forty, one, or none? The NPS should propose an alternative that would remove the existing campsites and/or restrict existing activities and around the area.

Response:
Earlier in the planning process the NPS considered expanding the campground by 12 additional sites. After discussions with natural resource specialists, park managers, landscape architects, and other specialists, the NPS determined this action would result in adverse impacts on the visitor experience and wilderness characteristics of the area. Subsequently, the NPS analyzed three alternatives:

- no expansion and continued day use in the Existing Conditions/No Action Alternative
- development of four additional sites, with a formal parking area to better manage day use in the Former Preferred Future and New Proposed Action alternatives
- closure and elimination of the campground and restricted day use in the New Ideas Alternative.

Please refer to the aforementioned alternatives and the corresponding environmental analysis sections for the reasons these alternatives were proposed. The NPS determined the mandatory establishment of proposed restrictions for Alamo Canyon Campground in the New Ideas Alternative was unclear in the Supplement and, subsequently, has clarified them in the Errata section.

Quitobaquito Springs

Comment Letters: Defenders of Wildlife; Environmental Protection Agency; public meeting

Comment:
The plan did not do an adequate analysis of potential impacts on the Quitobaquito area. For example, what are current levels of visitation and what are the impacts now occurring to wildlife species and other resources in that area, as a result of current or increasing levels of visitation? What impacts have these visitors had on nonnative species, either plant or animal? Will an overall increase in monument visitation translate into increased visitation to Quitobaquito? The NPS should take action now, not at some point in the future, to determine appropriate user capacities for Quitobaquito and restrict visitation there.

Response:
The health and vitality of species at Quitobaquito Springs is described in the *Affected Environment and Existing Condition/No Action Alternative* sections of the Draft GMP/DCP/EIS. Information on existing impacts on vegetation, wildlife, and water quality can be found in the *Environmental Consequences* section of both the Draft GMP/DCP/EIS and the Supplement. Visitors have probably caused or facilitated the spread of nonnative species, which is recognized as a serious and constant threat, and the monument currently performs weekly inspections of Quitobaquito, including looking for nonnative species. Visitor use estimates are made for the visitor center and for scenic and access routes within the monument, however, there is no documentation on the number of annual visitors to Quitobaquito. Actions proposed at Quitobaquito are designed to accommodate increasing visitation and protect resource values. NPS proposals for the area must be conducted in consultation with the U.S. Fish and Wildlife Service and prior to implementation, all federal laws protecting these species must be adhered to. A formal opinion from the U.S. Fish and Wildlife Service is attached with the biological assessment in Appendix A.

NPS has committed to fully assessing carrying capacity at Quitobaquito prior to implementation of design plans. During the general management planning process, a number of issues were identified at this area which will require further analysis and planning — which is precisely the purpose of a programmatic planning process. The development concept plan for this area is conceptual in nature — it attempts to address known issues given NPS management objectives, but also identifies other issues which will require more detailed study should implementation plans proceed. NPS will prepare an environmental assessment for public comment, which will include further analysis of appropriate visitation levels, during the design phase.

Comment:
Will the expected increase in human visitation be offset by the new, marked trails at Quitobaquito? Was an alternative considered to decrease the level of human visitation at Quitobaquito Springs, in order to decrease impacts on the pupfish's critical habitat and other resources?

Response:
Please see the *New Ideas Alternative* in the Supplement, for a discussion on the mandatory permits or tours that would be instituted to manage all visitors in this area. At this time, there is insufficient data as to whether visitation helps protect the pupfish, and if not, how many visitors is too many. One commentor (see Rosen letter), feels that the area and its resources would be better protected by increased use. The NPS would prepare a study to assess the human carrying capacity of this area, and assess alternative use strategies at that time. The New Proposed Action Alternative, presented in the Supplement and summarized in this document, would result in a reduction of unofficial social trails thereby resulting in a net decrease in trails in the area and throughout the monument.

Comment:
The Supplement notes that a pullout has been proposed on the Mexican side of the border, along Highway 2, with a pedestrian crossing from the Mexican highway north into the springs area. The NPS should analyze the additional potential adverse impacts of this potential new threat to the Quitobaquito Springs area.

Response:
The NPS does not propose a pullout and crossing on the Mexican side of the border; the Supplement reiterates an idea presented during public review of the Draft GMP/DCP/EIS. In response to this idea, the NPS would be willing to enter into discussions to determine if this idea is feasible, but only if representatives from Mexico pursue the idea (see page S-39 in the Supplement). At this time, Mexican representatives have not pursued this idea. If discussed in the future, then feasibility of the idea, including required compliance regarding modification of access to the site, would also occur at that later date.

Comment:
The NPS should more carefully analyze the impacts from having a maintained trail system in the Quitobaquito wetland area. Please address the level of direct or indirect impacts on wetlands and the impacts of monument and trail developments on Quitobaquito.

Response:
As stated in the impacts section of the Draft GMP/DCP/EIS and the Supplement, a maintained trail system will provide greater protection for the wetland. As stated in the *Introduction* to the Environmental Consequences section, a more detailed site-specific planning and analysis would be required before implementing some actions contained in this document. These may include preparing project-specific environmental assessments, obtaining additional clearances and permits from regulatory agencies, or developing further mitigation strategies. Before implementing the Quitobaquito actions, further environmental analysis will be conducted, including site specific design, visitor use and wildlife surveys. If it is determined at that time that the implementation of the general management plan at the Quitobaquito area will have adverse impacts, appropriate mitigation actions would be taken.

Comment:
The NPS should ensure the Quitobaquito Springs area is wheelchair accessible.

Response:
The NPS intends to do this. Please see page S-39 in the Supplement for a description of the development concept for this area, and page S-51 for the accompanying map.

Lukeville Area

Comment Letters: Environmental Protection Agency

Comment:
The final environmental impact statement should discuss in greater detail the impacts of an increase in visitors and changes in the monument on the Lukeville area, including population growth. The final environmental impact statement should address if there is an adequate infrastructure in Lukeville to accommodate more people and if not, what are some of the possible remedies that may be employed.

Response:
Please refer to page S-93, in the *Impacts to Socioeconomics* section of the Supplement. The NPS is proposing to look for a potential partner to build or acquire housing for seasonals. Other than that, no significant population growth is expected to result from proposed NPS facilities in Lukeville. The NPS draws these conclusions based on the remoteness of the community, along with the limited services available to support additional residents. Lukeville currently has adequate sewer and water services. In addition, the monument has its own sewer system.

Trails

Comment Letters: Defenders of Wildlife; Environmental Protection Agency

Comment:
There is an inadequate range of alternatives regarding trails on the monument. No alternative recommends reducing the number of trails, while all three alternatives propose a significant increase in new trails. There needs to be a detailed impact analysis regarding the impacts of these trails on wildlife. The final environmental impact statement should discuss direct and indirect impacts on areas where the NPS knows there will be development and trail management and the measures that will be employed to mitigate those impacts.

Response:
Most of the proposed routes in the proposed action occur in heavily used areas where trails have been worn and developed by use. Because most have been previously disturbed, NPS feels that formalizing these routes will accommodate visitor desire for additional trails, while better managing this use, restoring unimproved routes to natural conditions, and minimizing additional disturbance of wilderness lands. Cumulatively, there are less than two miles of new routes in the proposed action.

Redesignation

Comment Letters: Cole, D.; Bellingham, J. and B.; Petition Letter; Public Meeting

Comment:
Re-classifying the monument into Sonoran Desert National Park will be a waste of taxpayers money and will cost more to manage in the long run.

Response:
It takes an Act of Congress to re-classify a National Monument into a National Park. National Park status would not guarantee any change — increases or decreases — to current funding levels.

Comment:
Redesignating the area as a National Park will increase congestion and forever damage its pristine desert experience.

Response:
Redesignation of the National Monument into a National Park will not affect management and protection of the Organ Pipe Cactus Wilderness which comprises 95% of the land base. The most pristine areas of the monument will remain in Congressionally designated and protected wilderness areas. As for congestion, it is difficult to predict the increase in visitation. Some units of the National Park System that recently were redesignated as a National Park have experienced only temporary surges in visitation. Since this is a recent phenomenon, the NPS is unable to determine if there will be any long-term affects on the number of visitors.

Comment:
Is there any additional authority with a National Park? Will it stay concurrent jurisdiction?

Response:
There is no difference between the authorities of National Parks, National Monuments, and all other units of the NPS. All units most comply with the same laws, regulations, and management policies.

Comment:
Does the proposed action contain visitor restrictions based on the carrying capacity of the Quitobaquito Springs area? The plan should have additional alternatives calling for different levels of restricted access to Quitobaquito, with differential impact levels discussed.

Response:
The proposed action does not call for visitor restrictions via a permit system at Quitobaquito as the *New Ideas Alternative* did. The monument currently has in place overnight use limits for backcountry areas, which would continue. However, the proposed action does call for a carrying capacity type study that may lead to other user limits in the area. When the study has been performed and completed, the public will again have an opportunity to comment on specific information contained in the environmental assessment of any resulting site-specific proposals.

Appendixes

Appendix A: Biological Assessment and Final Opinion

The following biological assessment was prepared as part of formal consultation with the U.S. Fish and Wildlife Service regarding the potential affects of the proposed plan on endangered species in the monument. Also, the response of the Fish and Wildlife Service is printed. Based on this opinion, the NPS has incorporated the measures proposed into the general management plan.

BIOLOGICAL ASSESSMENT

Effects of the Organ Pipe Cactus National Monument General Management Plan on Threatened and Endangered Species

INTRODUCTION

The National Park Service (NPS) has recently prepared a Draft General Management Plan/Development Concept Plans/ Environmental Impact Statement (May, 1995), and a Supplement to the Draft General Management Plan/Development Concept Plans/Environmental Impact Statement (April 1996) for Organ Pipe Cactus National Monument, Pima County, Arizona. The purpose of a general management plan is to guide future management of a park or other NPS unit for the next 10-15 years. Actions proposed in the plan are general in nature and present a program for comprehensive management of resources and visitor use.

The programmatic nature of many proposals contained in general management plans makes it difficult to quantify actions or environmental impacts. Consequently, before implementing some actions, more detailed plans would be prepared, and the specific consequences of the projects analyzed in compliance with the National Environmental Policy Act and other federal laws and regulations. Additional planning and analysis may also determine the need for further Section 7 consultation for some threatened and endangered species.

Some of the actions proposed in the General Management Plan (hereafter referred to as the GMP) include:

- working with the Arizona Department of Transportation to ensure continued travel and commerce while enhancing resource protection along the State Route 85 corridor within the monument
- seeking redesignation of the monument to Sonoran Desert National Park
- establishing partnerships with federal agencies and private organizations to share facilities, staff, and costs in the Why and Lukeville areas
- proposing an increase in designated wilderness and development of an interagency (National Park Service, Bureau of Land Management, and Fish and Wildlife Service) regional wilderness and backcountry management plan to coordinate and enhance protection of wilderness-related values
- re-aligning the trail network in the Quitobaquito Springs area
- retaining existing development in the Twin Peaks area with some additions and change in the use of some buildings
- increasing the amount of primitive camping and designated trails in the monument
- full implementation of the monument's Natural and Cultural Resources Management Plan

Section 7 of the Endangered Species Act, as amended, prohibits federal agencies such as the NPS from implementing any action that is likely to jeopardize the continued existence of a federally protected (i.e., endangered, threatened) species. Furthermore, the act requires that the NPS consult with the Fish and Wildlife Service (FWS) on any action it authorizes, funds, or executes that could potentially affect a protected species or its designated critical habitat. To help meet its responsibilities under the Act, this biological assessment evaluates the effects of the GMP on listed and proposed species known to occur within the boundaries of Organ Pipe Cactus National Monument.

Based on information received from the FWS's Arizona Ecological Services State Office (FWS reference: AESO/SE 2-21-89-I-078; dated March 29, 1995), and verified by the NPS, the following listed species, all endangered, are known to occur within the monument and are addressed in this biological assessment: lesser long-nosed bat *(Leptonycteris curasoae yerbabuenae)*, Sonoran pronghorn *(Antilocapra americana sonoriensis)*, and desert pupfish *(Cyprinodon macularis)*. Also known to occur within the monument is the cactus ferruginous pygmy-owl *(Glaucidium brasilianum cactorum)*, which was recently listed as endangered. Proposed critical habitat for this owl has been identified in the vicinity of Alamo Canyon.

The NPS has determined that actions proposed in the GMP would have no effect on the American peregrine falcon *(Falco peregrinus anatum)* or brown pelican *(Pelecanus occidentalis),* both of which are endangered and known to occur within the monument. The brown pelican is a very rare visitor with only four reported sightings, the last of which occurred in July 1972 at Quitobaquito Pond (Groschupf et al. 1988). The peregrine falcon is a rare transient with no confirmed breeding accounts, although breeding habitat exists in remote backcountry areas of the monument. None of the actions proposed in the GMP would result in long-term effects on habitat or prey for either species.

LESSER LONG-NOSED BAT

The lesser-long nosed bat is a seasonal resident in the monument, occurring between April and September. In 1989, the largest known maternity colony in the U.S., consisting of approximately 20,000 bats, was discovered roosting in an abandoned mine adit (Copper Mountain Mine) near Alamo Canyon. Through coordination with the FWS, the NPS has instituted an annual monitoring program to obtain data on the colony including its size, productivity, diet, and habitat requirements.

Proposed Actions That May Affect the Lesser Long-Nosed Bat

Three actions proposed in the GMP have the potential to increase visitor use in the Alamo Canyon area and could possibly lead to human disturbance at the nearby maternity roost. These actions include:

- preparing a study to determine if campsites could be added, and if so, the appropriate number and location of sites
- establishing a formal day-use parking area
- formalizing an existing social trail (an old road scar) into a designated trail

Visitor surveys and demand for camping at the Alamo Canyon Wash campground show increasing interest in a primitive camping experience, accessible by vehicle. During the heavy use period (late October through mid-April), this campground is almost always full. The existing campground currently contains four campsites, a composting/vault toilet, and a large parking area. Each campsite has a maximum user capacity of four persons per site, for a total campground capacity of 20 campers. Previously, the proposed action called for development of up to four campsites in this area in response to visitor demand. Discussions with the U.S. Fish and Wildlife Service prompted the NPS to reconsider this proposal. Instead, the NPS proposes to do further study before determining the appropriate number and location of added sites, if any.

Currently, a compacted area (roughly 3,500 square feet in size), encircled by large rocks, is located at the end of the access road and serves as a day-use parking and vehicle turn-around area. The GMP proposes to better delineate this parking area while restricting ground disturbance to the roadbed. To further manage visitor use, the existing social trail that follows an old road scar along the wash would be formalized into a designated hiking trail, about 2.25 miles in length. Because the parking area and trail would be constructed on previously disturbed ground, there would be no additional vegetation removed.

Analysis

The highly gregarious roosting behavior of the lesser long-nosed bat makes it vulnerable to catastrophic population loss caused by human disturbance (FWS 1993a). Such disturbance could have a potentially adverse affect on the species' survival if it resulted in abandonment of a major roost or a decline in juvenile survivorship or recruitment. The proximity of the maternity roost to Alamo Canyon campground, located 2.25 miles away, coupled with the fact that features such as mine adits are attractive destinations for hikers, increases the potential for human disturbance at the roost site.

Previous indications are that little, if any visitation presently occurs at the maternity roost, particularly at the time of year when bats are roosting. Moreover, the nondescript nature and hazardous appearance of the adit discourages all but the most determined hikers from visiting the site. (The entrance to the adit is fenced with four-strand barbed wire and signed in both Spanish and English as a dangerous site.) Although campground expansion and trail development are likely to lead to increased visitation and prolonged visitor stays in Alamo Canyon, these actions are not expected to result in disturbance to the nearby maternity colony of lesser long-nosed bats.

As outlined in the draft recovery plan for the lesser long-nosed bat (FWS 1993a), recovery actions should stress protection of known roosts, determination of foraging and mating behavior, population monitoring, and public education. The NPS is

assisting in recovery efforts through ongoing monitoring of the maternity roost, protecting all potential roost sites and food plants within the monument, and educating visitors about the ecological importance of bats.

Reasonable and Prudent Measures Proposed

To ensure that management actions such as campground expansion do not result in adverse effects on the lesser long-nosed bat, the NPS would continue to monitor human disturbance at the roost. If monitoring reveals that human activity has become a problem at the site, the NPS would reconsider the appropriateness of campground expansion as well as the need for visitor use restrictions in the Alamo Canyon area.

Determination of Effect

Increased visitor use of the Alamo Canyon area resulting from the proposed feasibiltiy study for possible campground expansion and trail development is expected to have **no effect** on the nearby maternity colony of lesser long-nosed bats for the following reasons: (1) visitation to the monument and use of Alamo Canyon is relatively low during the time of year that bats are roosting; and (2) the remote location and nondescript nature of the adit would discourage all but the most determined hikers from visiting the roost. Moreover, continuation of the annual monitoring program would aid in recovery efforts for this species.

SONORAN PRONGHORN

Organ Pipe Cactus National Monument is within the historic range of the Sonoran pronghorn. Prior to a recent verified sighting of two pronghorns just west of State Route 85 near the Alamo Canyon road in mid-August 1995 (Organ Pipe Cactus Natl. Mon., unpublished data), the last verified observation of a pronghorn near this highway was a carcass found on Ajo Mountain Drive in 1972. (There is an unconfirmed report of four Sonoran pronghorn crossing State Route 85 in August 1993, approximately 1.5 km north of the monument visitor center.) Although observations along State Route 85 have been limited in past decades, pronghorns were supposedly not uncommon along the highway and throughout the Sonoyta Valley as recently as the 1960s (H. Coss, pers. comm.). Long-time Ajo residents reported seeing more Sonoran pronghorn along the highway near Ajo and south in the Valley of the Ajo in previous decades (FWS 1994).

Proposed Actions That May Affect the Sonoran Pronghorn

There are no actions proposed in the GMP that would directly affect the Sonoran pronghorn. All proposed facilities would be located within areas of existing development (e.g. Twin Peaks, Lukeville, and Quitobaquito Springs) and would involve relatively small tracts of land surrounded by larger areas of undisturbed habitat. Consequently, there would be no significant loss of pronghorn habitat, nor would new construction significantly modify pronghorn behavior or habitat use.

However, increased visitor use may lead to indirect effects on the Sonoran pronghorn. Increased use of some front- and backcountry areas has the potential to adversely affect pronghorn if it causes an alteration in behavior and habitat use. Increased visitation to the monument is also expected to result in increased traffic along State Route 85, adding to the barrier effect that existing traffic patterns already present to pronghorn movements.

Approximately 22 miles of State Route 85 lie within the monument. The Arizona Department of Transportation (ADOT) maintains the road and shoulders within the monument under an 1941 Cooperative Areement with the State and Pima County that applies to an area extending 33 feet from each side of the road centerline. ADOT is also responsible for establishing the speed limit and performing road improvements along the highway. Under a separate agreement, the State of Arizona Department of Public Safety and the NPS share responsibility for patrolling the road and enforcing the posted speed limit of 55 mph within the monument.

The international port-of-entry at Lukeville is open from 6:00 a.m. until midnight each day. Average daily traffic on the road fluctuates, but has generally increased in recent years. In 1992, ADOT reported average daily traffic counts of 940 vehicles on the section of State Route 85 within the monument; in 1993 average daily traffic along this same section of

highway fell to 728 vehicles, and in 1994, rose to 964 vehicles. Less than 25% of this traffic is attributed to monument visitors (Organ Pipe Cactus Natl. Mon., unpublished data).

Reasons for the increase in traffic are due to increased tourism in the region, including the Puerto Pe§asco area in northern Sonora, Mexico; the North American Free Trade Agreement (NAFTA); and increased visitation to the monument. Actions proposed in the GMP that could further increase visitation and use of State Route 85 involve expanded visitor services and recreational opportunities including an increase in the number of trails (approximately 9 additional miles) and primitive camping opportunities (4 sites at Alamo Canyon campground and approximately 20 walk-in sites in the Twin Peaks area), as well as additional facilities offering interpretation and information to visitors particularly in the Why and Lukeville areas. Redesignation of the monument to national park status is expected to cause a temporary surge in visitation. However, it is unknown if the increase would be long-term.

Analysis

Observations of pronghorn movements suggest that traffic along State Route 85 acts as a barrier to pronghorn, restricting their movements to areas west of the highway. Not only is the highway a deterrent to expanding pronghorn populations, but the resulting modified behavior patterns may lead to a reduction in genetic exchange, reduced viability, and the ability to adapt to environmental change. Mexico's Highway 2, located a short distance from the monument's southern boundary, as well as Interstate-8 to the north, present similar impediments to desert pronghorn (Ockenfels et al. 1996).

The NPS has examined the effectiveness of various mitigation strategies at reducing the barrier that State Route 85 currently presents to pronghorn. Eleven methods traditionally used to decrease wildlife-vehicle accidents and facilitate safe passage across highways were examined. These methods included driver education, speed and traffic volume reductions, vegetation removal along road shoulders, construction of underpasses and overpasses, and the use of fencing, lighting, warning signs, reflectors, and ultrasonic devices. Although past research has generally been limited to cervids, it is assumed that the behavioral response to such measures is probably similar among all ungulates (D. Reed, pers. comm.).

Several methods were dismissed from further consideration due to their impracticality (e.g., installation of ultrasonic devices on vehicles), or because of their incompatibility with the monument's wilderness values (e.g., highway lighting would be a source of light pollution and degrade night sky visibility; overpasses would provide a visual intrusion that would be conspicuous from many miles away [they would have to be at least 4.25 meters high to allow commercial trucks to pass safely beneath]). Other measures were dropped from consideration due to public controversy and because they were beyond the NPS's control (e.g., speed limit reductions; reducing traffic volume by rerouting non-monument traffic outside the park). Because fenced highways have been shown to fragment pronghorn habitat and isolate herds (Ockenfels et al. 1996), this technique was also dismissed from further study. Of the methods being considered for implementation (driver education, construction of underpasses, vegetation removal along road shoulders, use of warning signs and reflectors), a discussion of the effectiveness of each technique is provided below. This analysis is based largely on a review of the literature as well as discussions with biologists knowledgeable in the use of these techniques.

Driver Education

Del Frate and Spraker (1991) reported that a public awareness program on the Kenai Peninsula in Alaska increased motorists' understanding of the potential hazards of encountering moose on Peninsula roads. However, it is uncertain whether this measure was directly responsible for a reduction in roadkills. Reed (1985) hypothesizes that even with intensive driver education, the reduction of cervid-vehicle accidents under real conditions would be minimal since the demands of driving under nighttime conditions typically exceed the motorist's visual alertness and physical capabilities.

Construction of Underpasses

Wildlife underpasses have been shown to be effective at facilitating safe passage of cervids across highways, when designed and constructed with adequate openness. Reed (1985) referred to the primary stimulus of a given underpass to approaching cervids as the "openness effect", calculated as: height x width (or open-end surface area)/length. The greater the "openness effect", the greater the potential for use of a particular underpass.

Conversely, the confining characteristics of relatively long and narrow underpasses may prevent some animals from using these structures. Although underpasses would be most effective along State Route 85 in areas of known wildlife use, such as xeroriparian corridors, some pronghorn may have difficulty locating or simply refuse to enter underpasses. Moreover, any gains experienced by ensuring safe passage across the highway could be offset by a potential increase in predator-related mortality. Such structures could serve as a predator trap, allowing mountain lions and coyotes to sucessfully ambush pronghorn at underpass openings.

Vegetation Removal along Road Shoulders

Since removing vegetation along the shoulders of State Route 85 would result in a slight widening of the road corridor, it may also increase the barrier that the highway presents to pronghorn. Although limited research has been conducted on the effects of vegetation removal at reducing cervid-vehicle accidents, Pojar (1971) reported that clearing roadside vegetation did not significantly reduce the number of accidents despite increased motorist visibility and reduced cover for deer.

Use of Warning Signs

Of the five studies cited by Reed (1985), motorists' responses to warning signs were insufficient to affect the frequency of cervid-vehicle accidents along roadways. Although Mansfield and Miller (1975) reported that 76- by 76-cm symbol type warning signs reduced deer-vehicle accidents in 11 of 19 study areas in California, only 2 of these areas revealed a significant difference in accident numbers. Nor were lighted, animated deer crossing signs effective at significantly reducing deer-vehicle accidents in Colorado (Pojar et al. 1975). Similarly, game crossing signs were shown to have little or no effect on vehicle speeds in Sweden (Edholm and Kolsrud 1960, Aberg 1981) despite being noticed by 60 percent of passing motorists (Johansson and Backlund 1970).

Use of Reflectors

Reed (1985) reports limited research on the effectiveness of wildlife reflectors at reducing cervid-vehicle accidents. Gordon (1969) and Almkvist et al. (1980) indicated that stainless steel mirrors were ineffective at reducing accidents. Studies of Swareflex reflectors revealed conflicting results with some studies citing their effectiveness (Morris, pers. comm. [cited in Reed 1985], Schafer and Penland 1985), while others note their ineffectiveness (Woodard et al. 1973, Ossinger and Schafer 1992) at reducing cervid-vehicle accidents. Moreover, Zacks (1986) found that white-tailed deer (*Odocoileus virginianus*) did not evade or overtly respond to red light, the basic premise underlying the use of Swareflex reflectors.

Conclusion. Despite efforts to educate motorists, enforce the existing speed limit, and create underpasses to facilitate safe passage across State Route 85, such measures may do little in alleviating the barrier that existing and future traffic patterns will present to Sonoran pronghorn. Pronghorn may still avoid the highway corridor due to the visual and noise disturbance associated with the heavy volume of traffic travelling at high speeds. Elevated heart rates have been correlated with auditory or visual disturbance among pronghorn (Thompson et al. 1968, Cherkovich and Tatoyan 1973, Moen et al. 1978 [cited in FWS 1994]). Hughes and Smith (1990) reported flight distances of 400-500 meters in response to an approaching vehicle. A continued increase in traffic levels along this highway due in part, to an anticipated increase in monument visitation, may adversely affect the Sonoran pronghorn by continuing to restrict pronghorn movements, which could lead to a reduction in genetic exchange and reduced viability, potentially eliminating populations from this portion of their range.

Reasonable and Prudent Measures Proposed

Most of the mitigation techniques studied to date have focused on reducing cervid-vehicle accidents, and not on alleviating the barrier that roadways may present to wildlife, particularly ungulates. To better facilitate pronghorn movements across highways and railroad rights-of-way, Ockenfels et al. (1996) recommend the following mitigation measures: (1) eliminate fences from known movement corridors; (2) move fences farther away from rights-of-way; (3) construct expansive underpasses or overpasses over rights-of-way; and (4) relocate rights-of-way out of pronghorn habitat. They also suggest that if none of these measures prove effective, translocating pronghorn may be the only solution to maintaining gene flow and supplementing numbers in isolated herds.

Because ADOT is responsible for all road improvements and maintenance along State Route 85, any mitigation practices undertaken within their perpetual easement (33 feet from either side of the road centerline) must be done with full approval of that agency. Consequently, methods suggested in this document are those that the NPS would like to see implemented along the road corridor, subject to the state's approval. To help promote cooperative efforts, the NPS would pursue an agreement between the two agencies to (1) establish a vehicle for continued communication regarding road-related issues; (2) construct underpasses at known movement corridors to facilitate safe passage of pronghorn across the highway; and (3) establish a program to explore other measures to better understand and subsequently reduce the impacts of State Route 85 on pronghorn. In the meantime, the NPS would continue working with the Arizona Department of Public Safety to enforce the existing speed limit within the monument.

Of the mitigation techniques evaluated, construction of underpasses at known movement corridors along the highway shows the greatest promise at reducing the barrier that State Route 85 presents to pronghorn. The NPS would work with the FWS, including biologists from the Cabeza Prieta National Wildlife Refuge, as well as personnel from the Arizona Department of Transportation, to determine the feasibility, best location(s), and optimum design for underpasses. (One potential location for an underpass is near miles 65-67, in an area dominated by chainfruit cholla [*Opuntia fulgida*]; habitat that appears to be particularly important to pronghorn during periods of limited water availability [L. Thompson-Olais, pers. comm.]).

To help reduce the barrier that fences present to pronghorn, the top strand of barbed wire on the monument's northern boundary fence would be replaced with smooth wire (the bottom strand has already been replaced) to facilitate pronghorn movements between the monument and Cabeza Prieta National Wildlife Refuge. Similar modifications would be made to the monument's southern boundary fence to encourage pronghorn movements between the monument and Mexico.

An effort also would be made to educate motorists about the plight of pronghorn using a variety of interpretive media. Some of the techniques to be employed include the use of signs and wayside exhibits particularly at the north and south entrances to the monument and along the highway corridor. It is hoped that these efforts would elicit lower speeds and increased awareness among motorists. Although such actions may do little in alleviating the barrier that the roadway currently presents to pronghorn, it may provide a greater benefit to monument fauna by reducing wildlife-vehicle accidents along the road corridor.

Key components of the recently revised draft recovery plan for the Sonoran pronghorn include monitoring the present U.S. population, assisting with monitoring in Mexico, protecting and managing known habitat, and continuing research efforts to provide a better understanding of the subspecies (FWS 1994). The NPS will assist in Sonoran pronghorn recovery by continuing to serve as a member of the interagency Core Working Group. As called for in the monument's Natural and Cultural Resources Management Plan (NPS 1994), the NPS will implement activities outlined in the recovery plan, under the lead of the FWS, including development of a monitoring program. Furthermore, to reduce the potential for adverse impacts on pronghorn resulting from increased visitor use in front- and backcountry areas of the monument, the NPS would monitor visitor use and restrict access where necessary to minimize the potential for disturbance to pronghorn.

Determination of Effect

Since there would be no substantive changes to traffic levels or patterns along State Route 85, existing and future road conditions would continue to act as a barrier, restricting pronghorn movements to areas west of the highway. Such actions **may adversely affect** Sonoran pronghorn if it leads to a reduction in genetic exchange and reduced viability, potentially eliminating populations from this portion of their range.

However, to help reduce the impact of State Route 85 on pronghorn, the NPS proposes to:

- pursue an agreement between the NPS and ADOT to (1) establish a vehicle for continued communication regarding road-related issues; (2) construct underpasses at known movement corridors to facilitate safe passage of pronghorn across the highway; and (3) establish a program to explore other measures to better understand and subsequently reduce the impacts of State Route 85 on pronghorn
- continue working with the Arizona Department of Public Safety to enforce the existing speed limit within the monument
- convert the top and bottom strands of the monument's north and south boundary fences to smooth wire to encourage pronghorn movements between the monument and Cabeza Prieta National Wildlife Refuge to the north, and Mexico to the south

- educate motorists about the plight of pronghorn using a variety of interpretive media in an effort to elicit lower speeds and increased awareness of wildlife use of the highway corridor
- continue to serve as a member of the interagency Core Working Group for Sonoran pronghorn recovery and implement activities outlined in the recovery plan, including development of a monitoring program
- monitor visitor use and restrict access where necessary to minimize the potential for disturbance to pronghorn

QUITOBAQUITO DESERT PUPFISH

The Quitobaquito desert pupfish, endemic to the spring outflows and pond at Quitobaquito, is the only fish known to occur within the monument. Anthropogenic impacts (e.g., water pollution, introduction of non-native fish) and stochastic events (e.g., environmental perturbations) pose a potential threat to the subspecies' survival. Since 1975, a monitoring program has been conducted annually to assess the population's status. Population estimates have ranged from a high of 7,294 individuals in 1975, to a low of 1,800 in 1981, with intervening years reporting a population size of 3,000-6,700 individuals. A census conducted in 1993 reported 2,305 and 4,299 fish in the pond during the spring and fall censuses, respectively. More recently, 6,644 pupfish were reported during a 1995 census.

Observations made during the biannual census indicate that the population is in good condition with a healthy distribution of age and size classes. No non-native fish were discovered in either the pond or channel. However, a 10-inch black bullhead (*Ictalurus melas*) was caught and removed from the southwest spring during a census for the Sonoran mud turtle (*Kinosternon sonoriense*) on August 1, 1993. (It is unknown whether this fish represents an isolated introduction or is part of a larger population released into the Quitobaquito system.) Trapping for non-native fish is ongoing and continues at approximately 10-week intervals.

Because population counts appear to typically underestimate the actual number of fish present, the monitoring protocol requires a review and possible modification to ensure validity and usefulness of the data. The monument's Natural and Cultural Resources Management Plan (NPS 1994) recognizes this deficiency and calls for the implementation of an expanded Quitobaquito desert pupfish monitoring program.

Proposed Actions That May Affect the Quitobaquito Desert Pupfish

To enhance visitor experience and resource protection, the GMP proposes several actions that would alter visitor use patterns in the Quitobaquito area. These actions focus on relocating visitor facilities and establishing day-use standards and user capacities to be developed as part of an inter-agency wilderness management plan.

A new parking lot would be placed in a previously disturbed area at the current intersection of Puerto Blanco Drive and the Quitobaquito road (refer to the site plan on page S-49 of the GMP Supplement). An orientation sign, interpretive information, a composting or vault toilet, and picnic tables shaded by a simple ramada, would be provided near the parking area. (Moving the parking lot and other facilities is expected to decrease the incidence of vehicle break-ins and theft in the area.)

A well-defined trail network would be established along existing roads and disturbed areas. This relatively easy, approximately one-mile loop trail would be made accessible to visitors with disabilities. The new trail would begin at the proposed parking area and travel along what is now the road. Approximately 0.5-mile down the trail, a new trail segment would be added that leads to the springs and on to the historic pond. A small portion of the trail network would be established near the pond to offer views of the pond and good birding opportunities. From the pond, the trail would loop back along the former parking lot and road, returning to the trailhead.

Once funding is secured, a multi-agency task force would be established to determine the exact location of proposed facilities and trails, and to develop detailed design drawings for the site. At a minimum, the task force would include representatives of the Tohono O'odham Nation, the FWS, the State Historic Preservation Office, and the NPS. Team members would represent various disciplines including archeology, anthropology, landscape architecture, and wildlife biology.

Analysis

Establishment of a well-designed and maintained trail system would have a long-term beneficial affect on the Quitobaquito desert pupfish and its designated critical habitat. By encouraging visitors to remain on established trails, there would be a reduction and possibly an elimination of vegetation trampling along the pond's littoral zone. This highly productive zone, dominated by stands of bulrush and submerged aquatic vegetation, is rich in invertebrates and provides protective cover, along with important foraging, spawning, and resting areas for desert pupfish.

To further minimize the potential for impacts on the pupfish population or its critical habitat, visitor use would be closely regulated through development of a visitor carrying capacity for the area. Although the pupfish population would remain vulnerable to stochastic events, visitor use restrictions would help reduce the risk from anthropogenic impacts.

The NPS would continue to aid pupfish recovery efforts by implementing actions contained in the desert pupfish recovery plan (FWS 1993b). Some of the specific actions to be accomplished include an expansion of the current monitoring program to assess population status, detect trends, and evaluate the success of pupfish recovery. The NPS would continue to conduct habitat assessments and population estimates under site-specific protocols mutually established by the NPS and FWS, and assist with the collection of life history information to help determine factors affecting population persistence. In addition, the NPS would further its efforts to educate the public about the plight of the Quitobaquito desert pupfish through a variety of interpretive media (e.g., wayside exhibits, brochures, guided walks). The NPS would work closely with the FWS on the above actions.

Reasonable and Prudent Measures Proposed

The NPS would continue to monitor the effects of visitor use on desert pupfish habitat. Use of the Quitobaquito area would be closely regulated through establishment of a visitor carrying capacity which would be based primarily on the area's ability to withstand visitor use while ensuring resource protection. Activities determined to have an adverse impact on pupfish habitat would be further restricted or possibly eliminated.

Determination of Effect

Establishment of a well-defined and maintained trail system, as well as visitor use restrictions would have a **beneficial affect** on the Quitobaquito desert pupfish and its critical habitat by minimizing vegetation trampling along the pond's littoral zone. By restricting visitor access in the Quitobaquito area, the risk from anthropogenic impacts also would be reduced. The NPS would continue to aid pupfish recovery efforts by implementing actions contained in the desert pupfish recovery plan.

CACTUS FERRUGINOUS PYGMY-OWL

The cactus ferruginous pygmy-owl is an uncommon permanent resident that occurs in washes and saguaro stands. The most recent verified sighting of a pygmy-owl within the monument has occurred this spring in the employee housing area at Twin Peaks. Prior to this sighting, the last recorded observation was in 1995 on the Ajo Mountains bajada (T. Tibbitts, pers. comm.). The cause for the ferruginous pygmy-owl's decline within the monument and throughout the northern part of its range is unknown. However, the ongoing destruction of riparian habitat across the region may partially explain the reasons behind the decline.

Critical habitat for the cactus ferruginous pygmy-owl has been proposed from the well in Alamo Canyon (T16S, R4W, unsurveyed Section 6) downstream to the point where Growler Wash intersects the Bates Well Road. The boundaries encompass the current active channel, in addition to secondary, side, and overflow channels extending up to 100 meters laterally of the 100-year floodplain. Despite nearly annual reports, a confirmed sighting of this owl has not occurred in the vicinity of the Alamo Canyon campground for nearly 10 years. However, the nearby wash has been proposed as critical habitat since it possesses suitable habitat characteristics and has the potential to support nesting owls.

Proposed Actions That May Affect the Cactus Ferruginous Pygmy-Owl

Three actions proposed in the GMP have the potential to increase visitor use or alter vegetation in the Alamo Canyon area which could affect the cactus ferruginous pygmy-owl or its proposed critical habitat. These actions are the same as those described for the lesser long-nosed bat and include:

- preparing a feasibility study to determine if campsites could be added
- establishing a formal day-use parking area
- formalizing an existing social trail (an old road scar) into a designated trail

Visitor surveys and demand for camping at the Alamo Canyon Wash campground show increasing interest in a primitive camping experience, accessible by vehicle. During the heavy use period (late October through mid-April), this campground is almost always full. The existing campground currently contains four campsites, a composting/vault toilet, and a large parking area. Each campsite has a maximum user capacity of four persons per site, for a total campground capacity of 20 campers. Previously, the proposed action called for development of up to four campsites in this area in response to visitor demand. Discussions with the U.S. Fish and Wildlife Service prompted the NPS to reconsider this proposal. Instead, the NPS proposes to do further study before determining the appropriate number and location of added sites, if any.

Currently, a compacted area (roughly 3,500 square feet in size), encircled by large rocks, is located at the end of the access road and serves as a day-use parking and vehicle turn-around area. The GMP proposes to better delineate this parking area while restricting ground disturbance to the roadbed. To further manage visitor use, the existing social trail that follows an old road scar along the wash would be formalized into a designated hiking trail, about 2.25 miles in length. Because the parking area and trail would be constructed on previously disturbed ground, there would be no additional vegetation removed.

Analysis

Surveys for the cactus ferruginous pygmy-owl have been performed by NPS personnel in the Alamo Canyon area for the last two years. Surveys have been conducted approximately 12 times per year from December through June, with negative results.

Expansion of the Alamo Canyon campground would occur within proposed critical habitat for the cactus ferruginous pygmy-owl, eliminating less than 0.1 acre of desertscrub vegetation, primarily triangle-leaf bursage (*Ambrosia deltoidea*) and creosote (*Larrea tridentata*). Wherever possible, campsites would be situated to avoid the removal of large trees, shrubs, and columnar cacti. The proposed parking area would not involve new ground disturbance or vegetation removal since it would be located entirely within the existing roadbed. Similarly, the establishment of a formal hiking trail along Alamo Canyon wash would not result in additional habitat losses since the new trail would incorporate an existing social trail over its entire length.

Although day use in the Alamo Canyon area is typically limited to hikes along the wash, which is also within proposed critical habitat for the cactus ferruginous pygmy-owl, this type of visitor use is generally infrequent, occurs at low-levels, and is confined to the existing trail. Likewise, the current low-levels of overnight use do not appear to have an adverse impact on this species. However, the affect that doubling the size of the campground would have is unknown. Since campground expansion could result in the presence of twice as many campers (a maximum of 40 vs 20 campers currently) in the area at dawn and dusk, periods when this owl is actively foraging, the potential for human disturbance would be greater than under existing conditions.

Reasonable and Prudent Measures Proposed

To ensure that campground expansion and increased visitor use of the Alamo Canyon area does not result in adverse effects on the cactus ferruginous pygmy-owl, the NPS would continue to conduct owl surveys at this location. If subsequent surveys reveal the presence of pygmy-owls, the NPS would reconsider the appropriateness of campground expansion as well as the need for visitor use restrictions in the Alamo Canyon area.

Determination of Effect

Proposed actions in the Alamo Canyon area would have **no effect** on the cactus ferruginous pygmy-owl due to the lack of this owl's confirmed presence in the area, the low potential for human disturbance, and negligible habitat losses.

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2-21-89-F-078

SUMMARY
BIOLOGICAL OPINION FOR
ORGAN PIPE CACTUS NATIONAL MONUMENT GENERAL MANAGEMENT PLAN

Date of opinion: June 26, 1997

Action agency: National Park Service

Project: Organ Pipe Cactus National Monument General Management Plan

Location: Pima County

Listed species affected: Endangered Sonoran pronghorn (Antilocapra americana sonoriensis) lesser long-nosed bat (Leptonycteris curasoae yerbabuenae) and cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum)

Biological opinion: The proposed project is not likely to jeopardize the continued existence of the lesser long-nosed bat, Sonoran pronghorn, or cactus ferruginous pygmy-owl.

Incidental take statement:

Anticipated take: *Exceeding this level may require reinitiation of formal consultation.* Anticipated take for the lesser long-nosed bat is based on possible unauthorized entry of a roost. Anticipated take for the Sonoran pronghorn is based on the possibility of injury or death due to traffic along State Route 85. Anticipated take for the cactus ferruginous pygmy-owl is based on the possibility of harassment of individuals due to human visitation in the Alamo Canyon Wash area.

Reasonable and prudent measures: *Implementation of these measures through the terms and conditions is mandatory.* Three reasonable and prudent measures reduce and minimize roost disturbance, monitoring and protection for the lesser long-nosed bat. Four reasonable and prudent measures reduce and minimize the effects of traffic, fences, and visitor use on the Sonoran pronghorn. Three reasonable and prudent measures reduce and minimize the effects of increased visitation to the Alamo Canyon Wash area.

Terms and conditions: *Terms and conditions implement reasonable and prudent measures and are mandatory requirements.* Three terms and conditions implement the reasonable and prudent measures for the lesser long-nosed bat. Five terms and conditions implement the reasonable and prudent measures for the Sonoran pronghorn. Six terms and conditions implement the reasonable and prudent measures for the cactus ferruginous pygmy-owl.

Conservation recommendations: *Implementation of conservation recommendations is discretionary.* Two conservation recommendations were given to help implement recovery and increase public awareness of the lesser long-nosed bat. One conservation recommendation was given to implement recovery of the Sonoran pronghorn. Two conservation recommendations were given to gain more information on the status and natural history of the cactus ferruginous pygmy-owl.

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In Reply Refer To:

AESO/SE
2-21-89-F-078

June 26, 1997

MEMORANDUM

TO: Project Manager, Denver Service Center, National Park Service, Denver, Colorado

FROM: Field Supervisor

SUBJECT: Biological Opinion for Organ Pipe Cactus National Monument General Management Plan

The U.S. Fish and Wildlife Service (Service) has reviewed the biological assessment for the Organ Pipe Cactus National Monument General Management Plan (GMP) located in Pima County, Arizona. Your May 21, 1996, request for formal consultation was received on May 22, 1996. *This document represents the Service's biological opinion on the effects of that action* on the endangered lesser long-nosed bat (Leptonycteris curasoae yerbabuenae), Sonoran pronghorn (Antilocapra americana sonoriensis), and cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum) in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended, (16 U.S.C. 1531 et seq.).

This biological opinion is based on information provided in the undated biological assessment, the May 1995 draft General Management Plan/Development Concept Plans/Environmental Impact Statement, the April 1996 supplement to the draft General Management Plan/Development Concept Plans/Environmental Impact Statement, telephone conversations, meetings, 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, park management and recreation and their effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file in this office.

In this biological opinion the Service finds that the effects of the proposed project are not likely to jeopardize the continued existence of the lesser long-nosed bat, the Sonoran pronghorn, or the cactus ferruginous pygmy-owl. Three terms and conditions are described to reduce or eliminate take anticipated for the lesser long-nosed bat. Seven terms and conditions are described to reduce or eliminate take anticipated for the Sonoran pronghorn. Six terms and conditions are described to reduce or eliminate take anticipated for the cactus ferruginous pygmy-owl.

CONSULTATION HISTORY

On April 4, 1989, the Service responded to a request from the Park Service for a species list for Organ Pipe Cactus National Monument. On July 21, 1993, the Park Service requested another species list for the Monument and reinitiated informal consultation. The Service provided a species list on August 5, 1993. The Park Service requested a species list on March 21, 1994. The Service provided a species list on April 5, 1994. The Park Service requested review of species lists on June 2, 1994. The Service provided a species list on June 16, 1994. The Park Service requested an updated species list on February 24, 1995. The Service provided a species list on March 29, 1995. On April 18, 1995, the Park Service issued a draft general management plan/development concept plans/environmental impact statement for Organ Pipe Cactus National Monument to the Service for review. The Service responded with comments regarding that review on August 24, 1995. On August 18, 1995, the Park Service issued a letter to the Service stating a supplement to the draft environmental impact statement would be developed. A meeting regarding section 7 consultation was conducted at Monument headquarters on March 26, 1996. On May 21, 1996, the Park Service requested formal consultation and provided a biological assessment to the Service. The Service responded to that request on September 16, 1996. On September 23, 1996, the Park Service issued a letter to the Service transmitting a copy of an internal draft of the final general management plan. On September 24, 1996, the Park Service and the Service agreed that December 10, 1996, would be the due date for a biological opinion. On October 29, 1996, the Park Service issued a memorandum to the Service regarding the December 10 due date. On November 21, 1996, the Service responded to that letter stating it hoped to have a biological opinion completed by February 15, 1997.

Because of higher priorities, the Service postponed work on the opinion and a Service biologist met with a biologist from Organ Pipe on-site to discuss the status of the pygmy-owl and alternatives to doubling the size of the campground at Alamo Wash. The Park Service was notified of possible problems concerning the effects of the campground expansion on the pygmy-owl in late April. On May 6, 1997, a draft modified description of the proposed action was received by the Service. Comments were returned on May 7, 1997, and the proposed action was modified.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

The purpose of a general management plan is to guide future management of a park or other Park Service unit for the next ten or fifteen years. Some of the actions proposed in the General Management Plan include:

1. Working with the Arizona Department of Transportation to ensure continued travel and commerce while enhancing resource protection along the State Route 85 corridor within the monument.

2. Seeking redesignation of the monument to Sonoran Desert National Park.

3. Establishing partnerships with Federal agencies and private organizations to share facilities, staff, and costs in the Why and Lukeville areas.

4. Proposing an increase in designated wilderness and development of an interagency regional wilderness and backcountry management plan to coordinate and enhance protection of wilderness-related values.

5. Realigning the trail network in the Quitobaquito Springs area.

6. Retaining existing development in the Twin Peaks area with some additions and change in the use of some buildings.

7. Increasing the amount of primitive camping and designated trails in the monument.

8. Full implementation of the monument's Natural and Cultural Resources Management Plan.

Visitor surveys and demand for camping at the Alamo Canyon Wash campground show increasing interest in a primitive camping experience, accessible by vehicle. During the heavy use period (late October through mid-April), this campground is almost always full. The existing campground currently contains four campsites, a composting/vault toilet, and a large parking area. Each campsite has a maximum user capacity of four persons per site, for a total campground capacity of 20 campers. To help accommodate visitor demand, the GMP proposes to conduct a feasibility study to determine if additional campsites could be added. The sites would be located within the non-wilderness road corridor (150 feet from either side of road centerline), in previously disturbed areas, to the extent possible, and somewhat separated from other sites to offer a sense of privacy. Previously, the proposed action called for development of up to 4 campsites in this area. Though informal consultations with the Service, the NPS decided to reconsider this proposal because of the need for further study before determining the appropriate number and location of added sites, if any. Currently, a compacted area (roughly 3,500 square feet in size), encircled by large rocks, is located at the end of the access road and serves as a day-use parking and vehicle turn-around area. The GMP proposes to better delineate this parking area while restricting ground disturbance to the roadbed. To further manage visitor use, the existing social trail that follows an old road scar along the wash would be formalized into a designated hiking trail, about 2.25 miles in length. Because the parking area and trail would be constructed on previously disturbed ground, there would be no additional vegetation removed.

According to the Park Service, there are no actions proposed in the GMP that would directly affect the Sonoran pronghorn. All proposed facilities would be located within areas of existing development and would involve relatively small tracts of land surrounded by larger areas of undisturbed habitat. However, increased visitor use may lead to indirect effects on the Sonoran pronghorn. Increased use of some front and backcountry areas has the potential to adversely affect pronghorn if it causes an alteration in behavior and habitat use. Increased visitation to the

Monument is also expected to result in increased traffic along State Route 85, adding to the barrier effect that existing traffic patterns already present to pronghorn movements.

Approximately 22 miles of State Route 85 lie within the Monument. The State of Arizona and Pima County are responsible for maintaining the federally constructed road under a 1941 cooperative agreement. Since the Monument was established before the road was constructed and the Federal government never deeded a legal interest in the road to the State or county, the NPS believes that neither the State nor County has a right-of-way for State route 85 through the Monument. The NPS believes it may impose reasonable resource protection and public safety regulations on use of the road.

The international port-of-entry at Lukeville is open from 6:00 AM until midnight each day. Average daily traffic on the road fluctuates but has generally increased in recent years. In 1992, ADOT reported average daily traffic counts of 940 vehicles on the section of State Route 85 within the Monument; in 1993 average daily traffic along this same section of highway fell to 728 vehicles, and in 1994, rose to 964 vehicles. Less than 25% of this traffic is attributed to Monument visitors.

Reasons for the increase in traffic are due to increased tourism in the region, including the Puerto Penasco area in northern Sonora, Mexico; the North American Free Trade Agreement (NAFTA); and increased visitation to the Monument. Actions proposed in the GMP that could further increase visitation and use of State Route 85 involve expanded visitor services and recreational opportunities including an increase in the number of trails (approximately 9 additional miles) and primitive camping opportunities (4 sites at Alamo Canyon campground and approximately 20 walk-in sites in the Twin Peaks area), as well as additional facilities offering interpretation and information to visitors particularly in the Why and Lukeville areas. Redesignation of the Monument to national park status is expected to cause a temporary surge in visitation. However, it is unknown if the increase would be long-term.

To help reduce the impact of State Route 85 on pronghorn, the Park Service proposes to do the following.

1. Pursue an agreement between the Park Service and Arizona Department of Transportation to establish a vehicle for continued communication regarding road-related issues, construct underpasses at known movement corridors to facilitate safe passage of pronghorn across the highway, and establish a program to explore other measures to better understand and subsequently reduce the impacts of State Route 85 on pronghorn.

2. Continue working with the Arizona Department of Public Safety to enforce the existing speed limit within the Monument.

3. Convert the bottom strands of the Monument's north and south boundary fences to smooth wire to encourage pronghorn movements between the Monument and surrounding areas.

4. Educate motorists about the plight of pronghorn using a variety of interpretive media in an effort to elicit lower speeds and increased awareness of wildlife use of the highway corridor.

5. Continue to serve as a member of the interagency Core Working Group for Sonoran pronghorn recovery and implement activities outlined in the recovery plan, including development of a monitoring program.

6. Monitor visitor use and restrict access where necessary to minimize the potential for disturbance to pronghorn.

STATUS OF THE SPECIES

Lesser long-nosed bat

The lesser long-nosed bat was listed (originally, as Sanborn's long-nosed bat) as endangered on September 30, 1988 (53 FR 38456). No critical habitat has been designated for this species. The lesser long-nosed bat is a small, leaf-nosed bat. It has a long muzzle and a long tongue. These features are adaptations to collect nectar from the flowers of columnar cactus, such as the saguaro and organ pipe, and from paniculate agaves (Hoffmeister, 1986). This migratory species is found throughout its historic range from southern Arizona, through western Mexico, and south to El Salvador. It occurs in southern Arizona from the Picacho Mountains southwest to the Agua Dulce Mountains and southeast to the Chiricahua Mountains and south to Mexico. Arizona roosts are occupied from late April to September (Cockrum and Petryszyn, 1991). Adult females, most of which are pregnant, and their recent young are the first to arrive, and they form maternity colonies at lower elevations near concentrations of flowering columnar cacti. After the young are weaned, these colonies disband in July and August; some females and young move to higher elevations, primarily in the southeastern parts of Arizona near concentrations of blooming paniculate agaves. Adult males are known mostly from the Chiricahua Mountains but also occur with adult females and young of the year at maternity sites (Fleming, 1994).

Loss of roost and foraging habitat, as well as direct taking of individual bats during animal control programs, particularly in Mexico, have contributed to the current status of the species. Suitable day roosts and suitable concentrations of food plants are the two resources that are critical for the lesser long-nosed bat (Fleming, 1994). As indicated above, the lesser long-nosed bat consumes nectar and pollen of paniculate agave flowers and the nectar, pollen, and fruit produced by a variety of columnar cacti. Caves and mines are used as day roosts. The factors that make roost sites useable have not yet been identified. Whatever the factors are that determine selection of roost locations, the species appears to be sensitive to human disturbance. Instances are known where a single brief visit is sufficient to cause a high proportion of lesser long-nosed bats to temporarily abandon their day roost and move to another. Perhaps most disturbed bats return to their preferred roost in a few days. However, the sensitivity suggests that the presence of alternate roost sites may be critical when human disturbance occurs. Interspecific interactions may also influence lesser long-nosed bat roost requirements.

Known major roost sites include 16 large roosts in Arizona and Mexico (Fleming, 1994). According to surveys conducted in 1992 and 1993, the number of bats estimated to occupy these sites was greater than 200,000. Twelve major maternity roost sites are known for Arizona and Mexico. According to the same surveys, the maternity roosts are occupied by over 150,000 lesser long-nosed bats. The numbers above indicate that although there may be relatively large numbers of these bats known to exist, the relative number of known large roosts is small. Disturbance of these roosts and the food plants associated with them could lead to the loss of the roosts. The limited numbers of maternity roosts may be the critical factor in the survival of this species.

Sonoran pronghorn

The Sonoran pronghorn is recognized as a distinct subspecies of the pronghorn (Antilocapra americana). It is distinguished from other subspecies by its small size, pale coloration, and distinctive cranial features (Goldman, 1945). The Sonoran pronghorn was listed as an endangered species on March 11, 1967. In Arizona, the Sonoran pronghorn occurs on the Cabeza Prieta National Wildlife Refuge (NWR), the Goldwater Range, and Organ Pipe Cactus National Monument, from Highway 85 west to the Cabeza Prieta Mountains and from approximately the Wellton-Mohawk Canal south to the Mexican border (Snow 1994, Service 1982). Recent unconfirmed sightings suggest some animals may occur on the Tohono O'odham Reservation and in the Lechuguilla Desert, west of the Cabeza Prieta Mountains, as well (Service 1994, J. Hervert, Arizona Game and Fish Department, Yuma, Arizona, pers. comm., 1996). In Sonora, the Sonoran pronghorn is known from near Sonoyta south to the Puerfo Penasco area, east to the sandy plains around Bahia de San Jorge, and west into flats surrounding the Sierra de Pinacate (Service, 1994). The current range of the Sonoran pronghorn is estimated at more than 4.9 million acres (Service, 1994). Historically, the range of the Sonoran pronghorn may have been much larger, extending further west, possibly into the Yuma Desert, Imperial Valley of California, and northeastern Baja California; to north of the Gila River; east to the Baboquivari Mountains; and south to Bahia Kino or Guaymas (Service 1994, Hall and Kelson 1959, Hoffmeister 1986). However, precise determination of the historic range is precluded by a lack of specimens and the largely anecdotal nature of historic records.

Based on survey data collected from 1992 to 1994, an estimated 125 to 256 Sonoran pronghorn occur in Arizona and 179 to 313 occur in Sonora (Snow 1994, Service 1994). Data are insufficient to determine trends in population size (Service 1994). Pronghorn are typically found in broad, alluvial valleys. They inhabit creosote (Larrea tridentata) and bursage (Ambrosia deltoidea and A. dumosa) vegetation communities year round and more diverse vegetation associations from late winter to early fall (Service 1994). Hughes and Smith (1990) found Sonoran pronghorn in areas of approximately 11 percent perennial cover.

The diet of Sonoran pronghorn consists of a variety of plant materials, particularly cacti, such as fruits of jumping cholla (Opuntia fulgida); herbaceous species such as plantain (Plantago insulariser sources to Sonoran pronghorn is unknown. Hughes and Smith (1990) found no significant difference in distance of pronghorn localities to water between the wet and dry

seasons, implying that they do not congregate near water. Monson (1968) found no evidence that pronghorn drink water, even when it is available. Wright and deVos (1986) and J. Hervert (pers. comm. 1996) have documented Sonoran pronghorn at water sources on numerous occasions, but have only documented one instance of a Sonoran pronghorn drinking water.

Pronghorn become sexually mature at 12 to 16 months. Parturition occurs from February through May and animals rut from July to September (Kitchen and O'Gara 1982, Service 1994). Mean home range size is 56.1 square kilometers for males and 45.2 square kilometers for females (deVos 1990). At the onset of the hot, dry period in late spring, individual animals move distances of up to 50 km from lower, sparsely vegetated valleys to areas of more complex vegetation. With the onset of the summer rains, animals move back to areas with low vegetation diversity (deVos 1990).

The cause of population declines and extirpation from portions of its historic range include unregulated hunting in historic times, current illegal hunting in Sonora (Service 1994), degradation of habitat by livestock grazing, disturbance of habitat resulting from military ground-based activities, disturbance of animals caused by military overflights, loss of riparian habitat on the Gila River and the Rio Sonoyta that may have been important as foraging or watering areas, and conversion of habitat to agriculture, particularly in the Gila River Valley and Imperial Valley, California (deVos 1990, Service 1994, 1982). Pronghorn that frequent artificial or natural water sources may be subject to increased predation levels due to the concentration of predators near water (Service 1994). Total number of pronghorn is less than 600 and this subspecies lives in an extremely harsh desert environment that is subject to extended drought. As a result, the viability of the species is sensitive to environmental and demographic stochastic events.

A population viability analysis conducted with the program VORTEX suggested that three factors are especially important in determining population persistence. The variability in population size increased, and in some cases, populations went extinct if any of the following three variables were included in a simulation: five catastrophic events, such as drought, occurring in 100 years; annual mortality of females in excess of 60 percent; or female fawn mortality in excess of 60 percent (deVos 1995).

The Service finalized a recovery plan for the Sonoran pronghorn in 1982. The recovery objective was defined as "maintain existing population numbers and distribution of Sonoran pronghorn while developing techniques which will result in a U.S. population of 300 animals (average for a five-year period) or numbers determined feasible for the habitat." The recovery plan is currently being revised. The draft plan calls for downlisting the Sonoran pronghorn to threatened when the number of animals in Arizona reaches at least 500 and remains stable for a five year period, or when numbers are determined adequate to sustain the population through time (Service 1994).

Additional information on the taxonomy, range, distribution, biology, and threats to the Sonoran pronghorn can be found in Service (1994, 1982), Wright and deVos (1986), Hoffmeister (1986), Mearns (1907), Hughes (1991), Edwards and Ohmart (1981), deVos (1990), and Cockrum (1981).

Cactus ferruginous pygmy-owl

I. SPECIES DESCRIPTION

A. Listing history

The Service included the cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum) on its Animal Notice of Review as a category 2 candidate species throughout its range on January 6, 1989 (54 FR 554). After soliciting and reviewing additional information, the Service elevated G. b. cactorum to category 1 status throughout its range on November 21, 1991 (56 FR 58804). A category 1 species was, at that time, defined as a species for which the Service has on file substantial information to support listing, but for which a proposal to list has not been issued as it is precluded at present by other listing activities.

On May 26, 1992, a coalition of conservation organizations (Galvin et al. 1992) petitioned the Service, requesting listing of the pygmy-owl as an endangered subspecies under the Act. The petitioners also requested designation of critical habitat. In accordance with Section 4(b)(3)(A) of the Act, on March 9, 1993, the Service published a finding that the petition presented substantial scientific or commercial information indicating that listing may be warranted, and initiated a status review on the pygmy-owl (58 FR 13045). In conducting its status review, the Service solicited additional comments and biological data on the status of the cactus ferruginous pygmy-owl, through mailings, a notice in the Federal Register (58 FR 13045), and other means.

On December 12, 1994, the Service published a 12-month finding on the petitioned action (59 FR 63975). This finding indicated that listing of the cactus ferruginous pygmy-owl was warranted and a proposed rule was published on the same date to list the pygmy-owl as endangered in Arizona with critical habitat and as threatened in Texas without critical habitat. New information was received during comment periods indicating that population levels are higher in Arizona and Texas than were known at the time of the proposed rule. The Service determined that the Arizona population still warranted endangered status. Conversely, the new information indicated that listing the species as threatened in Texas was not warranted. Listing was finalized on March 10, 1997, and was effective on April 9, 1997.

B. Description and Range

The cactus ferruginous pygmy-owl is a small bird, approximately 17 centimeters (cm) (6 3/4 inches (in) long. Males average 62 grams (2.2 ounces), and females average 75 grams (2.6 ounces). The cactus ferruginous pygmy-owl is reddish-brown overall, with a cream-colored belly streaked with reddish-brown. Some individuals are grayish, rather than reddish-brown.

The crown is lightly streaked, and paired black-and-white spots on the nape suggest eyes. There are no ear tufts, and the eyes are yellow. The tail is relatively long for an owl and is colored reddish-brown with darker brown bars. The call of this diurnal owl, heard primarily near dawn and dusk, is a monotonous series of short notes.

The cactus ferruginous pygmy-owl (Order Strigiformes--Family Strigidae) is one of four subspecies of the ferruginous pygmy-owl. It occurs 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. The northernmost record for the pygmy-owl is from New River, Arizona, approximately 55 km (35 mi) north of Phoenix. South of these regions and through Central America, G. b. ridgwayi replaces G. b. cactorum. Throughout South America, G. b. brasilianum is the resident subspecies (Fisher 1893, van Rossem 1937, Friedmann et al. 1950, Schaldach 1963, Phillips et al. 1964, de Schauensee 1966, Karalus and Eckert 1974, Oberholser 1974, Johnsgard 1988). Additionally, Konig and Wink (1995) have identified a fourth subspecies of pygmy-owl from central Argentina. This new subspecies is G.b. stranecki.

The cactus ferruginous pygmy-owl (hereafter "pygmy-owl" unless otherwise noted) was described by van Rossem (1937), based on specimens from Arizona and Sonora. It is distinguished from G. b. ridgwayi and G. b. brasilianum by its shorter wings and longer tail, and by generally lighter coloration (van Rossem 1937, Phillips et al. 1964). G. b. cactorum occurs in several color phases, with distinct differences between regional populations (Sprunt 1955, Burton 1973, Tyler and Phillips 1978, Hilty and Brown 1986, Johnsgard 1988). Some investigators (e.g., van Rossem 1937, Tewes 1993) have suggested that further taxonomic investigation is needed, primarily to determine whether the current G. b. cactorum comprises more than one subspecies. G. b. cactorum is widely recognized as a valid subspecies (e.g., Friedmann et al. 1950, Blake 1953, Sprunt 1955, Phillips et al. 1964, Monson and Phillips 1981, Millsap and Johnson 1988, Binford 1989). The American Ornithologists' Union (AOU) recognized G. b. cactorum in its 1957 Checklist of North American Birds (AOU 1957), but subsequent lists did not include subspecies (AOU 1983).

C. Critical Habitat

Critical habitat, including 290 river miles in Arizona, was included in the draft rule, but was determined to be not prudent in the final rule.

II. LIFE HISTORY

A. Nesting Ecology

The pygmy-owl nests in a cavity in a tree or large columnar cactus. Cavities may be naturally formed (e.g., knotholes) or excavated by woodpeckers. No nest lining material is used. The pygmy-owl has also nested in fabricated nest boxes (Proudfoot et al. 1994a, Proudfoot 1996). Three, four, five, and occasionally six eggs are laid (Bent 1938, Heintzelman 1979, Glenn

Proudfoot, Texas A&M University at Caesar Kleberg Wildlife Research Institute, unpubl. data 1996) and are incubated for approximately 28 days. The young fledge about 28 days after hatching. The pygmy-owl begins nesting activities in late winter to early spring. It is nonmigratory throughout its range (Bendire 1888, Griscom and Crosby 1926, Oberholser 1974, Johnson et al. 1979).

B. Habitat selection

The pygmy-owl occurs in a variety of subtropical, scrub, and woodland communities, including riverbottom woodlands, woody thickets ("bosques"), coastal plain oak associations, thornscrub, and desertscrub. Unifying habitat characteristics among these communities are fairly dense woody thickets or woodlands, with trees and/or cacti large enough to provide nesting cavities. Throughout its range, the pygmy-owl occurs at low elevations, generally below 1,200 meters (m) [4,000 feet (ft)) (Swarth 1914, Karalus and Eckert 1974, Monson and Phillips 1981, Johnsgard 1988, Enriquez-Rocha et al. 1993).

In the western portion of its range, the pygmy-owl appears to use riparian woodlands and bosques dominated by mesquite and cottonwood, Sonoran Desertscrub (usually with relatively dense saguaro cactus forests), and Sinaloan Deciduous Forest (van Rossem 1945, Phillips et al. 1964, Karalus and Eckert 1974, Millsap and Johnson 1988). Fisher (1893) found the pygmy-owl to be "quite common" in thickets of intermixed mesquite and saguaro cactus near the New River, Arizona. Prior to the mid-1900s, the pygmy-owl was also described as not "uncommon", "of common occurrence," and "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 in Bent 1938, Gilman 1909, Swarth 1914). Bendire (1888) noted that he had taken "several" along Rillito Creek near Fort Lowell, in the vicinity of Tucson, Arizona. The pygmy-owl also occurs in Sonoran Desertscrub associations in southern and southwestern Arizona, comprised of palo verde, ironwood, mesquite, acacia, bursage, and columnar cacti such as the saguaro and organpipe (Phillips et al. 1964, Davis and Russell 1984 and 1990, Monson and Phillips 1981, Johnson and Haight 1985a, Johnsgard 1988).

In the past, the pygmy-owl's occurrence in Sonoran Desertscrub was apparently less common and predictable. It was more predictably found in xeroriparian habitats (very dense desertscrub thickets bordering dry desert washes) than more open, desert uplands (Monson and Phillips 1981, Johnson and Haight 1985a, Johnson-Duncan et al. 1988, Millsap and Johnson 1988, Davis and Russell 1990). The pygmy-owl was also noted to occur at isolated desert oases supporting small pockets of riparian and xeroriparian vegetation (Howell 1916, Phillips et al. 1964).

Both riparian and desertscrub habitats are likely to provide several requirements of the pygmy-owl ecology. Trees and large cacti provide cavities for nesting and roosting. Also, these habitats along watercourses are known for their high density and diversity of animal species that constitute the pygmy-owl's prey base (Carothers 1977, Johnson et al. 1977, Johnson and Haight

1985b, Stromberg 1993). In addition, the dense vegetation along these washes provides protective cover from aerial predators.

In central and southern Arizona, the pygmy-owl's primary habitats were riparian cottonwood (Populus spp.) forests, mesquite bosques, and Sonoran desertscrub, but the subspecies currently occurs primarily in Sonoran Desertscrub associations of palo verde (Cercidium spp.), bursage (Ambrosia spp.), ironwood (Olneya tesota), mesquite (Prosopis juliflora), acacia (Acacia spp.), and giant cacti such as saguaro (Cereus giganteus), and organpipe (Cereus thurberi) (Gilman 1909, Bent 1938, van Rossem 1945, Phillips et al. 1964, Monson and Phillips 1981, Johnson-Duncan et al. 1988, Millsap and Johnson 1988). Farther south in northwestern Mexico, the pygmy-owl occurs in Sonoran Desertscrub, Sinaloan Thornscrub, and Sinaloan Deciduous Forest as well as riverbottom woodlands, cactus forests and thornforest (Enriquez-Rocha et al. 1993). The pygmy-owl's diet includes birds, lizards, insects, small mammals (Bendire 1888, Sutton 1951, Sprunt 1955, Earhart and Johnson 1970, Oberholser 1974), and frogs (Proudfoot et al. 1994b).

III. Population Dynamics

A. Population size

Hunter (1988) found fewer than 20 verified records of pygmy-owls in Arizona for the period of 1971 to 1988. Although pygmy-owls are diurnal and frequently vocalize in the morning, the subspecies was not recorded or reported in any breeding bird survey data in Arizona (Robbins et al. 1986). Formal surveys for the pygmy-owl on Organ Pipe Cactus National Monument began in 1990, with one bird located that year. Beginning in 1992, survey efforts on the Monument were conducted in cooperation with the Arizona Game and Fish Department (AGFD). In 1992, surveys located three single pygmy-owls in Arizona (Fish and Wildlife Service and National Park Service, unpubl. data 1992). In 1993, more extensive surveys again located three single pygmy-owls in Arizona (AGFD unpubl. data 1993, Felley and Corman 1993). During 1993-1994 surveys, one pair of owls was detected in north Tucson, near the sightings in 1992 and 1993 (Collins and Corman 1995). Two individual owls were found in northwest Tucson during 1995 surveys, and an additional owl was detected at Organ Pipe Cactus National Monument (Lesh and Corman 1995).

In 1996, the AGFD focused survey efforts in northwest Tucson and Marana, and detected a total of 16 birds, two of which were a pair, and two of which were fledged young. An additional three pygmy-owls were detected on Organ Pipe Cactus National Monument in 1996, with three additional but unconfirmed reports (Harold Smith, National Park Service, Organ Pipe Cactus National Monument, in litt. 1996). So far in 1997, a total of 8 birds has been detected. Two pygmy-owls have been observed on Organ Pipe Cactus National Monument and six others have been observed in northwest Tucson.

While additional individual birds have been identified since the proposed rule was published, total individuals in Arizona are still extremely low at under 20 (Abbate 1996).

B. Population variability

The available information indicates that distinct eastern and western populations of the pygmy-owl may be defined. The pygmy-owl occurs along the lower Rio Grande River and the coastal plain of southern Texas and northeastern Mexico. It also occurs in lowland areas of northwestern Mexico and southern Arizona. The pygmy-owl's elevational distribution, the distribution of habitat, and recorded locations indicate that these eastern and western ranges of the pygmy-owl are geographically isolated from one another and are ecologically distinct. In the U.S., the eastern and western portions of the pygmy-owl's range are separated by the basin-and-range mountains and intervening Chihuahuan Desert basins of southeastern Arizona, southern New Mexico, and western Texas. Although Grossman and Hamlet (1964) suggested that the pygmy-owl's range included this U.S.-Mexico border region, the pygmy-owl has never been recorded in this 805 kilometer (km) [500-mile (mi)] wide area (Bailey 1928, Phillips et al. 1964, Oberholser 1974, Sartor O. Williams, New Mexico Department of Game and Fish, in litt. 1991).

In Mexico, the eastern and western populations are separated by the highlands of the Sierra Madre Oriental and Occidental, and the Mexican Plateau. The pygmy-owl is considered rare on the Mexican Plateau and/or above elevations of 1,200 m (4,000 ft) on the west, and above 300 m (1,000 ft) on the east (Friedman et al. 1950). Some sources describe the eastern and western ranges as contiguous at the southern end of its range, near the southern end of the Mexican Plateau in central Mexico (Johnsgard 1988). Other sources describe these two ranges as being disjunct (Burton 1973). In his description of the subspecies, van Rossem (1937) found that Texas specimens exhibited characteristics of both G. b. cactorum and G. b. ridgwayi. Ultimately, he did not assign Texas ferruginous pygmy-owls to G. b. cactorum, but noted that Ridgway (1914, in Van Rossem 1937) considered them distinct from G. b. ridwayi, and left the taxonomy of Texas pygmy-owls to be G. b. cactorum (e.g., Oberholser 1974, Millsap and Johnson 1988).

In addition to geographic separation, the pygmy-owl's eastern and western populations occupy different habitats. Although some broad similarities in habitat physiognomy are apparent (e.g., dense woodlands and thickets), floristically these eastern and western habitats are very dissimilar. The desertscrub and thornscrub associations in Arizona and western Mexico are unlike any habitats occupied by the pygmy-owl in eastern Mexico and southern Texas. Also, the oak association habitat occupied on coastal plains in southern Texas is unlike any habitat available in the western portion of the pygmy-owl's range. However, the Tamaulipan Thornscrub habitat of the east and the riverbottom mesquite-cottonwood bosque habitat once found in Arizona are more similar in physiognomy and to a slight degree in floristic makeup.

The potential for genetic distinctness further supports a distinction between eastern and western pygmy-owl populations. The fact that the pygmy-owl is nonmigratory throughout its range suggests that genetic mixing across wide areas may be infrequent. Considerable variation in plumage between regional populations has been noted, including specific distinctions between

Arizona and Texas pygmy-owls (van Rossem 1937, Burton 1973, Tyler and Phillips 1978, Johnsgard 1988).

The above information indicates that eastern and western populations of the cactus ferruginous pygmy-owl are distinct, based on geographic isolation, distribution and status of habitat, and potential morphological and genetic distinctness. Further, the status of the subspecies in Mexico is currently unclear (see discussion under "Factor A" below).

To date, the Service is aware of only one genetic study completed on pygmy-owls in the United States. Using toe clippings or blood samples, Zink et al. (1996) extracted DNA from pygmy-owls on the Norias Division of the King Ranch and from Rio Corona, Tamaulipas, Mexico. Data obtained from this study indicate that there is very little genetic difference between birds on the King Ranch and those in Tamaulipas, Mexico, and the authors concluded that any division between the two populations would therefore have occurred recently, likely within the last 75 years.

C. Population stability

Environmental stochasticity, demographic stochasticity, catastrophes, and genetic stochasticity are recognized as interacting factors that might contribute to a population's extinction (Hunter 1996). Environmental stochasticity refers to random variation in habitat quality parameters such as climate, nutrients, water, cover, pollutants, and relationships with other species such as prey, predators, competitors, or pathogens. Demographic stochasticity is uncertainty due to random variation in reproductive success and survivorship of individuals. Catastrophes are events such as droughts or hurricanes that occur randomly. Genetic stochasticity is the random variation in gene frequencies of a population due to genetic drift, bottlenecks, inbreeding, and similar factors. When these factors interact with one another, there are likely to be positive feedback loops, or "snowballing" of effects, such that a random environmental change like habitat fragmentation can result in population and genetic changes by preventing dispersal. These factors are much more likely to cause extinction when a species' numbers are already extremely low. The small, fragmented population of pygmy-owls in Arizona does not have the ability to resist change or dramatic fluctuations over time caused by one or more of the factors mentioned above.

IV. Status and distribution

A. Reasons for listing and range wide trend

1. The present or threatened destruction, modification, or curtailment of its habitat or range. The pygmy-owl is threatened by past, present, and potential future destruction and modification of its habitat, throughout a significant portion of its range in the U.S., and, to a less well-known extent, in portions of its range in Mexico (Phillips et al. 1964, Oberholser 1974, Johnson et al. 1979, Monson and Phillips 1981, Johnson and Haight 1985a, Hunter 1988, Jahrsdoerfer and Leslie 1988, Millsap and Johnson 1988, Ditto 1993, Tewes 1993, Mays 1996). The severity

of habitat loss and threats varies across the pygmy-owl's range. Population numbers have been drastically reduced in Arizona, which once constituted its major U.S. range. In Texas, the pygmy-owl has been virtually extirpated from the lower Rio Grande valley but persists in oak associations on the coastal plain north of the Rio Grande valley. The majority of these losses are due to destruction and modification of riparian and thornscrub habitats. It is estimated that between 85 to 90 percent of low-elevation riparian habitats in the southwestern U.S. have been modified or lost. These alterations and losses are attributed to urban and agricultural encroachment, woodcutting, water diversion and impoundment, channelization, livestock overgrazing, groundwater pumping, and hydrologic changes resulting from various land-use practices (e.g., Phillips et al. 1964, Carothers 1977, Kusler 1985, AGFD 1988a, DOI 1988, General Accounting Office 1988, Jahrsdoerfer and Leslie 1988, Szaro 1989, Dahl 1990, State of Arizona 1990, Bahre 1991). Status information for Mexico is very limited, but some observations suggest that although habitat loss and reduced numbers are likely to have occurred in northern portions of the two subspecies in Mexico, the pygmy-owl persists as a locally common bird in southern portions of Mexico. Habitat loss and population status are summarized below for the four populations of the pygmy-owl.

The trend of Sonoran Desertscrub habitats and pygmy-owl occupancy is not as clear. Historical records from this habitat in Arizona are few. This may be due to disproportionate collecting along rivers where humans were concentrated, while the upland deserts were less intensively surveyed. Johnson and Haight (1985a) suggested that the pygmy-owl adapted to upland associations and xeroriparian habitats in response to the demise of Arizona's riverbottom woodlands. However, conclusive evidence to support this hypothesis is not available. It may be that desertscrub habitats simply are of lesser quality and have always been occupied by pygmy-owls at lower frequency and density (Johnson and Height 1985b, Taylor 1986). While historical records of pygmy-owls do exist for Sonoran Desertscrub in areas such as the Santa Catalina foothills, they generally note that the birds are rare in these areas (Kimball 1921).

The pygmy-owl has declined throughout Arizona to the degree that it is now extremely limited in distribution in the State (Davis and Russell 1979, Johnson et al. 1979, Monson and Phillips 1981, AGFD 1988a, Johnson-Duncan et al. 1988, and Millsap and Johnson 1988). Riverbottom forests and bosques, which supported the greatest abundance of pygmy-owls, have been extensively modified and destroyed by clearing, urbanization, water management, and hydrological changes (Willard 1912, Brown et al. 1977, Rea 1983, Szaro 1989, Bahre 1991, Stromberg et al. 1992, Stromberg 1993). Cutting for domestic and industrial fuelwood was so extensive throughout southern Arizona that, by the late 19th century, riparian forests within tens of miles of towns and mines had been decimated (Bahre 1991). Mesquite was a favored species, because of its excellent fuel qualities. The famous, vast forests of "giant mesquites" along the Santa Cruz River in the Tucson area described by Swarth (1905) and Willard (1912) fell to this threat, as did the "heavy mesquite thickets" where Bendire (1888) collected pygmy-owl specimens along Rillito Creek, a Santa Cruz River tributary, also in what is now Tucson. Only remnant fragments of these bosques remain. Cottonwoods were also felled for fuelwood, fenceposts, and for the bark, which was used as cattle feed (Bahre 1991). In recent decades, the pygmy-owl's riparian habitat has continued to be modified and destroyed by agricultural

development, woodcutting, urban expansion, and general watershed degradation (Phillips et al. 1964, Brown et al. 1977, State of Arizona 1990, Bahre 1991, Stromberg et al. 1992, Stromberg 1993). Sonoran Desertscrub has been affected to varying degrees by urban and agricultural development, woodcutting, and livestock grazing (Bahre 1991).

In addition to clearing woodlands, pumping of groundwater and the diversion and channelization of natural watercourses are also likely to have reduced pygmy-owl habitat. Diversion and pumping result in diminished surface flows, and consequent reductions in riparian vegetation are likely (Brown et al. 1977, Stromberg et al. 1992, Stromberg 1993). Channelization often alters stream banks and fluvial dynamics necessary to maintain native riparian vegetation. The series of dams along most major southwestern rivers (e.g., the Colorado, Gila, Salt, and Verde) have altered riparian habitat downstream of dams through hydrological and vegetational changes, and have inundated habitat upstream.

Livestock overgrazing in riparian habitats is one of the most common causes of riparian degradation (e.g., Ames 1977, Carothers 1977, Behnke and Raleigh 1978, Forest Service 1979, General Accounting Office 1988). Effects of overgrazing include changes if plant community structure, species composition, relative species abundance, and plant density. These changes are often linked to more widespread changes in watershed hydrology (Brown et al. 1977, Rea 1983, GAO 1988), and are likely to affect the habitat characteristics critical to the pygmy-owl.

2. Overutilization for recreational purposes. The pygmy-owl is highly sought by bird watchers, who concentrate at several of the remaining known locations of pygmy-owls in the United States. Limited, careful bird watching is probably not harmful; however, excessive attention by bird watchers may at times constitute harassment and affect the occurrence and behavior of the pygmy-owl (Oberholser 1974, Tewes 1993). For example, in early 1993, one of the few areas in Texas known to support the pygmy-owl continued to be widely publicized (American Birding Association 1993). The resident pygmy-owls were detected at this highly-visited area only early in the breeding season and then disappeared. O'Neil (1990) also indicated that five birds initially detected in southern Texas failed to respond after repeated visits by birding tours. Oberholser (1974) and Hunter (1988) additionally indicated that, in southern Texas, recreational birdwatching may disturb owls at highly visited areas.

3. Disease or Predation. One disease potentially affecting the pygmy-owl, as identified by the AGFD (D. Shroufe, in litt. 1996), is trichomoniasis. Because owls prey on finches, sparrows, and other seed-eating birds known to carry trichomoniasis, they have a higher risk of contracting the disease. According to Boal and Mannan (1996), raptors in urban areas experience a higher exposure rate to trichomoniasis, and the result is high mortality of raptor nestlings. No studies have been completed to date on the pygmy-owl in urban or other areas to determine if, in fact, pygmy-owls have been affected by this disease.

Recent work by Proudfoot (1996) indicates that snake predation may be an additional factor adversely affecting the pygmy-owl population in Texas on the Norias Division of the King Ranch. Proudfoot noted that nest boxes previously containing eggs would later be discovered

empty, without sufficient time having elapsed to allow for fledging to occur. A lack of egg shell remains in nest boxes may indicate that snakes have predated nests containing pygmy-owl eggs. Although long-tailed weasels (Mustela frenata) also occur in this study area, the lack of egg shell remains and the nest box configuration indicate that weasels are not likely to have eaten the eggs. Nest boxes are typically 14 x 14 x 46 cm (5.5 x 5.5 x 18 in) with a 5.13 cm (2.0 in) entrance hole placed 31 cm (12 in) above the box bottom.

Proudfoot (1996) has observed the indigo snake (Drymarchon corais) climbing trees on the King Ranch and notes that the indigo snake is known to prey on cavity nesting green-cheeked Amazon parrots (Amazona viridigenalis). Proudfoot notes that, from 1993 to 1996, eight out of 112 available nest boxes (or 232 nest box opportunities) were used. Where flashing was placed around trees to prevent the possibility of predation by snakes, eggs were not disturbed. For the four nest boxes left unprotected, three were predated before the eggs hatched, while one was predated following hatching. Proudfoot further noted that fecundity (the number of young successfully raised per year), for natural cavities was approximately one-third that of fecundity for nest boxes, and speculates that eggs and birds in natural cavities were likely to have been predated by both snakes and long-tailed weasels, resulting in a lower fecundity rate (G. Proudfoot, pers. comm. 1996).

4. The inadequacy of existing regulatory mechanisms. The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) is the only direct, current Federal protection provided for the cactus ferruginous pygmy-owl. The MBTA prohibits "take" of any migratory bird. "Take" is defined as "... to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect". However, unlike the Endangered Species Act, there are no provisions in the MBTA preventing habitat destruction unless direct mortality or destruction of active nests occur.

The Federal Clean Water Act contains provisions for regulating impacts to river systems and their tributaries. These mechanisms have been insufficient to prevent major losses of riparian habitat, including habitats occupied by the pygmy-owl.

The Barry M. Goldwater Range, which overlaps the historical distributional range of the pygmy-owl, has an existing policy stating that, for any species that have been identified as State or Federal species of concern, the range will be inventoried, and potential impacts to those species analyzed with other information gathered. Projects can then be modified to avoid or minimize impacts to the species. The Goldwater Range also has identified any habitats that are unique or significant on the range, including desert washes, bajadas, and dunes. The Goldwater Range additionally has the flexibility to create management plans for any species of concern; however, no such policy currently exists for the pygmy-owl.

Organ Pipe Cactus National Monument (OPCNM), the second major location for pygmy-owls in the State of Arizona, provides protection for the pygmy-owl, as it does for all other natural and cultural resources. This protection has been compared as similar to the takings prohibitions of the MBTA and wildlife taking regulations for the State of Arizona (H. Smith, in litt. 1996).

The State of Arizona lists the ferruginous pygmy-owl (subspecies not defined) as endangered (AGFD 1988). However, this designation does not provide special regulatory protection. Arizona regulates the capture, handling, transportation, and take of most wildlife, including G. b. cactorum, through game laws, special licenses, and permits for scientific investigation. There are no provisions for habitat protection under Arizona endangered species law.

Most Federal agencies have policies to protect species listed by States as threatened or endangered, and some also protect species that are candidates for Federal listing. However, until agencies develop specific protection guidelines, evaluate their effectiveness, and institutionalize their implementation, it is uncertain whether any general agency policies adequately protect the pygmy-owl and its habitat.

No conservation plans or habitat restoration projects specific to the cactus ferruginous pygmy-owl exist for lands managed by the U.S. Government, Native American entities, State agencies, or private parties. The Forest Service, Bureau of Land Management, and Bureau of Reclamation have focused some attention on modifying livestock grazing practices in recent years, particularly as they affect riparian ecosystems. Several of these projects are in the former range of the pygmy-owl, including some historical nesting locations. In addition, some private landowners in Southern Texas are accommodating and funding research and have expressed an interest in carrying out conservation measures to benefit the pygmy-owl.

5. Other natural or unnatural factors affecting its continued existence. Environmental stochasticity, demographic stochasticity, catastrophes, and genetic stochasticity are recognized as interacting factors that might contribute to a population's extinction (Hunter 1996).

In addition, the data indicate low levels of genetic variation in the pygmy-owls. Populations without genetic variation are often considered imperiled due to either the effects of low population numbers, increased chances of inbreeding, or both (Soule 1986, Meffe and Carroll 1994).

Pesticides may pose an additional threat to the pygmy-owl, as it occurs in floodplain areas that are now largely agricultural. Jahrsdoerfer and Leslie (1988) note that >100 pesticides are used on agricultural crops throughout the lower Rio Grande Valley, with use beginning in the late 1940s. Pesticide application occurs year-round. Because crops, such as cotton, are grown repeatedly year after year, an accumulation of resistant pesticides may result.

Pesticide contamination is described as "widespread" throughout the inland waters of the lower Rio Grande Valley, and includes concentrations of DDT, dieldrin, endrin, lindane, endosulfan, Guthion, and PCBs which exceeded 1976 EPA criteria for propagation of fish and wildlife. Without appropriate precautions, these agents may potentially affect pygmy-owls through direct toxicity or effects on their food base. No quantitative data on the effects of this potential threat on the pygmy-owl are known at this time, however, the effects of pesticides such as DDT on the reproductive success of other bird species are well known.

The pygmy-owl nests in cavities excavated by woodpeckers in trees or large cacti. Some sources (AGFD 1988) believe that increasing competition with exotic European starling (Sturnus vulgaris) for nest cavities may be a threat to cavity nesters like the pygmy-owl. Starlings were first reported as occurring in Arizona in 1946 (Monson 1948).

An additional potential threat to the pygmy-owl is low recruitment. Recruitment is the number of young who survive long enough to leave the nest per nesting attempt. Proudfoot (1996) found through a study of four active nest cavities that only one was successful in fledging young. The recruitment rate for this study was therefore 1.0 (four nesting attempts with four young fledging from one nest, while the other three nests failed). We do not know what recruitment rate would be necessary for the pygmy-owl because of the lack of information on reproduction, longevity, natality, and mortality for this subspecies. However, Proudfoot estimated that, based on information for the eastern screech owl (Otus asio), a recruitment rate of 2.25 was necessary for a stable pygmy-owl population.

B. Future threats

Potential future threats to pygmy-owl habitat in Arizona persist. Through the public comment period, the Service was made aware of five specific housing and development projects operating or in the planning stages that would affect habitat where the majority of birds in Arizona currently exist. Housing and industrial development continue to expand in the Tucson area, and the northwest portion of the Tucson area is experiencing rapid growth. It was estimated that only 60 percent of the people living in the Tucson area are in the City of Tucson itself, even though the city limits continue to be expanded to keep up with urban expansion (Sierra Club 1988, Duane Shroufe, AGFD, in litt. 1996).

The AGFD (D. Shroufe, in litt. 1996) has estimated the number of suitable habitat acres (ac) in the northwest Tucson area, where the majority of birds for the western population are found, to be 22,032 hectares (ha) (54,400 ac). Surveys completed in 1996 covered 44.2 km^2 (17.0 mi^2) of this area (Abbate 1996). The AGFD notes that, while 60 percent of this land is in State Trust or BLM ownership, much of the land may be subject to development as the Town of Marana is developing a General Plan for future growth that may incorporate these areas. In addition, the BLM is evaluating a proposal to sell all of its land within this area to a developer.

At Organ Pipe Cactus National Monument, potential threats include the increased risk of wildfire associated with invasion of the Organ Pipe Cactus National Monument by non-native grasses such as red brome (Bromus tectorum) and buffelgrass (Pennisetum ciliare). An additional threat in this area is the increasing visitation and through-traffic from the international port of entry at Lukeville (H. Smith, in litt. 1996).

In addition, expanding human populations in the border region are expected to continue to increase impacts and threats discussed above. Further, extensive industrial, municipal, and agricultural developments facilitated by NAFTA are anticipated along the U.S.-Mexico

International border. These developments may result in accelerated habitat loss and demands on groundwater.

Further, because the pygmy-owl is nonmigratory, there may be an additional limitation on the flow of genetic material between populations which may reduce the chance of demographic and genetic rescue from immigration from adjacent populations.

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.

Lesser long-nosed bat

The lesser long-nosed bat is a seasonal resident in the monument, visiting between April and September. In 1989, the largest known maternity colony in the United States, consisting of approximately 20,000 bats, was discovered roosting in an abandoned mine adit near Alamo Canyon. The Park Service has instituted an annual monitoring program to obtain data on the colony including its size, productivity, diet, and habitat requirements. However, no monitoring results were provided for the consultation.

Sonoran pronghorn

Organ Pipe Cactus National Monument is within the historic and current range of the Sonoran pronghorn. Prior to a recent verified sighting of two pronghorn just west of State Route 85 near the Alamo Canyon road in mid-August 1995, the last verified observation of a pronghorn near this highway was a carcass found on Ajo Mountain Drive in 1972. There is an unconfirmed report of four Sonoran pronghorn crossing SR 85 in August 1993, approximately 1.5 km north of the monument visitor center. Although observations along SR 85 have been limited in recent decades, pronghorn were supposedly not uncommon along the highway and throughout the Sonoyta Valley as recently as the 1960s. Long-time residents reported seeing more Sonoran pronghorn along the highway near Ajo and south in the Valley of the Ajo in previous decades.

Cactus ferruginous pygmy-owl

Organ Pipe National Monument is within the historic range of the pygmy-owl and is one of the few places in Arizona where owls are consistently detected. Pygmy-owl presence has been surveyed within the action area since 1977 when two pairs were recorded. In 1982, one pair of pygmy-owls was found followed by two pairs in 1985, and one individual was found in 1992. No pygmy-owls were confirmed in the action area during any of the 8 surveys conducted

between November 1994 and April 1997. However, one probable and one possible pygmy-owl were detected along with unconfirmed sightings in 1995 and 1996 (Tim Tibbitts pers comm. 1997).

EFFECTS OF THE ACTION

Lesser long-nosed bat

Three actions proposed in the plan have the potential to increase visitor use in the Alamo Canyon area and could possibly lead to human disturbance at the nearby maternity roost. These actions include: expanding the campground by four sites, establishing a formal day-use parking area within the existing roadbed, and formalizing an existing social trail (an old road scar) into a designated trail. No restrictions would be placed on visitor use of the Alamo Canyon area.

Lesser long-nosed bat colonies appear to be sensitive to human disturbance. The highly gregarious roosting behavior of the lesser long-nosed bat makes it vulnerable to catastrophic population loss caused by human disturbance. Such disturbance could have potentially adverse effects on the species' survival if it resulted in abandonment of a major roost or decline in juvenile survivorship or recruitment. The proximity of the maternity roost to Alamo Canyon Campground, located 2.25 miles away, coupled with the fact that features such as mine adits are attractive destinations for hikers, increases the potential for human-induced disturbance at the roost site. The Park Service stated that previous indications are that little, if any, visitation presently occurs at the site, particularly at the time of year when bats are present. Specifically, the Park Service stated that in the past five years, Monument staff have suspected only three or four unauthorized entries, and disturbance of the resident bats was detected only once in 1995, when barn owls were found nesting in the adit and preying on the bats.

The entrance to the adit is currently fenced with four-strand barbed wire and signed in both Spanish and English as a dangerous site. To prohibit entry, the Park Service proposes a more permanent closure to minimize potential disturbance on the maternity colony. A "bat friendly" grate would be placed at each opening of the adit that would allow bats unimpeded access to the mine's interior, while prohibiting human entry.

Sonoran pronghorn

Observations of pronghorn movements suggest that traffic along SR 85 may act as a barrier to pronghorn, restricting their movements to areas east of the highway. Not only is the highway a possible deterrent to expanding pronghorn populations, but the resulting modified behavior patterns may lead to a reduction in genetic exchange, reduced viability, and the ability to adapt to environmental change.

To reduce wildlife mortality and habitat fragmentation along SR 85, the Park Service proposes to work with state and federal agencies to develop a research program examining the effectiveness of various traditional and innovative measures aimed at reducing wildlife mortality and facilitating

safe passage across the roadway. Some of the traditional methods to be examined include bridge construction and placement of oversized culverts beneath the roadway; vegetation removal along road shoulders; and educating motorists about wildlife use of the road corridor through various interpretive media, including road signs and wayside exhibits. Because fenced highways have been shown to fragment pronghorn habitat and isolate herds, the Park Service does not support their use to keep animals off SR 85 or to guide them to culverts. Because the effectiveness of techniques varies, the Park Service would not rely on any one method exclusively. Measures proven to be effective would be applied on a limited basis and further environmental analysis completed before expanding their use on a broader scale. In the meantime, the Park Service would continue working with the Arizona Department of Transportation towards enforcing the existing speed in the Monument.

The Park Service examined the effectiveness of various mitigation strategies at reducing the barrier that State Route 85 currently presents to pronghorn. Eleven methods traditionally used to decrease wildlife-vehicle accidents and facilitate safe passage across highways were examined. These methods included driver education, speed and traffic volume reductions, vegetation removal along road shoulders, construction of underpasses and overpasses, and the use of fencing, lighting, warning signs, reflectors, and ultrasonic devices.

Several methods were dismissed by the Park Service from further consideration due to their impracticality (e.g., installation of ultrasonic devices on vehicles), or because of their incompatibility with the Monument's wilderness values (e.g., highway lighting would be a source of light pollution and degrade night sky visibility; overpasses would provide a visual intrusion that would be conspicuous from many miles away. Other measures were dropped from consideration due to public controversy and because they were beyond the Park Service's control (e.g., speed limit reductions; reducing traffic volume by rerouting non-monument traffic outside the park). Because fenced highways have been shown to fragment pronghorn habitat and isolate herds, this technique was also dismissed from further study by the Park Service. The Park Service did consider driver education, construction of underpasses, vegetation removal along road shoulders, and use of warning signs and reflectors for implementation.

Vegetation removal along road shoulders would cause further habitat losses and may increase the barrier that SR 85 presents to pronghorn. Although bridge construction and culvert placement would focus on areas of known wildlife use, such as xeroriparian corridors (i.e., washes), some pronghorn may have difficulty locating or may simply refuse to enter culverts. Moreover, any gains experienced by ensuring safe passage across the highway could be offset by a potential increase in predator-related mortality. Such structures could serve as a predator trap, allowing mountain lions and coyotes to successfully ambush pronghorn at culvert openings. Because pronghorn, like other animals, are not restricted to xeroriparian habitats, the Park Service believes that increased efforts to educate motorists and enforce the existing speed limit may have the most impact on reducing the potential for vehicle-related mortality.

The Park Service stated that despite efforts to educate motorists, enforce the existing speed limit, and create underpasses to facilitate safe passage across State Route 85, such measures may do

little in alleviating the barrier that existing and future traffic patterns will present to Sonoran pronghorn. Pronghorn may still avoid the highway corridor due to the visual and noise disturbance associated with the heavy volume of traffic traveling at high speeds. Although response of Sonoran pronghorn to moving vehicles and other ground-based activities has not been rigorously investigated, some information exists.

DeVos (1989) investigated the relationship of telemetered Sonoran pronghorn localities to the proximity of "concentrated military activities" on the Goldwater Range. Numbers of localities were found to be greater than expected particularly in areas within 200 meters of military zones and were less than expected in areas 1,600 to 6,400 meters from military zones. The author attributed the latter to the fact that many pronghorn were initially captured on the Cabeza Prieta NWR and at Organ Pipe Cactus National Monument, at points distant from military activity, and would not be expected to occur near military zones. The author concludes that "it appears that the data from radio-collared pronghorn indicates that the presence of a military use zone is not a factor in determining habitat use by Sonoran pronghorn." However, as the author noted in regards to the paucity of localities at points distant from military zones, the localities of telemetered animals are probably related to the point of initial capture. Moreover, the use patterns and movements of the telemetered animals may or may not be representative of Sonoran pronghorn in general. The data presented by deVos (1989) do show that pronghorn can be found very close to and within areas of intensive military use. However, it does not indicate wbether animals alter habitat use patterns or avoid, to some degree, active military zones.

Evidence suggests that ground-based activities, such as those of troops and vehicles at ground-support areas are likely to affect pronghorn habitat use. Sonoran pronghorn typically become alarmed and flee if humans on foot or vehicles approach closely (Laura Thompson-Olais, pers. comm. 1996). Wright and deVos (1986) noted that Sonoran pronghorn exhibit "a heightened response to human traffic" as compared to other subspecies of pronghorn. They noted that "once aware of an observer, Sonoran pronghorn are quick to leave the area. One herd was observed 1 ½ hours later 18 kilometers north of the initial observation in October 1984. Other prongborn have run until out of the observer's sight when disturbed." Hughes and Smith (1990) noted that on all but one occasion, pronghorn ran from their vehicle and continued to run until they were out of sight. Locality records suggest that Sonoran pronghorn may avoid towns, highways, agriculture, and fences. All of this information indicates that Sonoran pronghorn would be expected to avoid areas where human use is occurring. In addition, encampments and years of repeated use by vehicles and troops have caused considerable surface disturbance and areas of "moondust" or highly eroded soils in ground-support areas (Dames and Moore 1995). This disturbance would be expected to reduce both perennial and ephemeral forage availability. Sonoran pronghorn move, in part, in response to forage availability (Wright and deVos 1986); thus areas of intensive ground activities may be avoided by prongborn because of reduced forage availability as well as to avoid interactions with humans. In additioo, oil and other hazardous materials spills could damage vegetation and create hazards for pronghorn and other animals.

Disturbance and flight of ungulates are known to result in a variety of physiological effects that are adverse, including elevated metabolism, lowered body weight, reduced fetus survival, and

withdrawal from suitable habitat (Geist 1971). Mule deer disturbed by snowmobiles and humans on foot expended from 0.2 to 5.0 percent of their daily metabolizable energy in each encounter (Freddy et al. 1986). Frequent disturbance imposes a burden on the energy and nutrient supply of animals (Geist 1978), which may be exacerbated in harsh environments such as the Goldwater Range. Repeated stimuli commonly leads to habituation and reduced response (Harris 1943); however, animals should habituate reluctantly to stimuli that pose a threat (MacArthur et al. 1979). White-tailed deer, mule deer, and mountain sheep did not exhibit signs of habituation to persons on foot (Freddy et al. 1986, MacArthur et al. 1982, Moen et al. 1982). The physiological responses of Sonoran pronghorn to human disturbance has not been studied; however, these and other ungulate studies suggest that human disturbance may result in a number of adverse physiological changes.

A continued increase in traffic levels along highway 85 due, in part, to an anticipated increase in Monument visitation, may adversely affect the Sonoran pronghorn by continuing to restrict pronghorn movements, which could lead to a reduction in genetic exchange and therefore a reduction in viability of the already small population.

Cactus ferruginous pygmy-owl

Two actions proposed in the plan have the potential to increase visitor use in the Alamo Caoyon area, and therefore increase disturbance to the pygmy-owl. These actions include: establishing a formal day-use parking area within the existing roadbed, and formalizing an existing social trail (an old road scar) into a designated trail. No restrictions would be placed on visitor use of the Alamo Canyon area.

Because of the extremely low known pygmy-owl population levels, any action with the potential to disturb habitat known to be important to the pygmy-owl, could have detrimental effects on the owl's continued existence in Arizona. Such disturbance could have potentially adverse effects on the species' survival if it resulted in habitat alteration, nest abandonment, or simply disturbance of the normal behavior patterns of adult owls. An increase in visitation could result in any of the above. However, the establishment of a formal day-use parking area and a formal trail is likely to keep habitat degradation to a minimum by encouraging visitors to park in the designated parking area and to stay on the trail. A very low level of take through harassment by visitors walking within territories is expected.

The Monument plans to conduct a feasibility study to determine if any campsites could be added at Alamo Canyon Wash. The Service believes a well planned feasibility study that includes a research program aimed at learning more about the bird will have beneficial effects on the conservation of this species. It is estimated that the number of pygmy-owls in Arizona is an estimated 11 individuals in 1997. In such low numbers, it would be impossible for the owls to occupy all suitable habitat. If we can determine what vegetation parameters are selected by the pygmy-owls, we will be more able to identify areas that need to be protected. Continuing to alter suitable pygmy-owl habitat would preclude the owl's recovery because, as the population began to increase, the owls would have no place to which they could emigrate.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, 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 ESA. No non-federal actions are expected within the action area.

CONCLUSION

After reviewing the current status of the lesser long nosed bat, the Sonoran pronghorn and the cactus ferruginous pygmy-owl, the environmental baseline for the action area, the effects of the proposed action 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 lesser long-nosed bat, the Sonoran pronghorn, or the cactus ferruginous pygmy-owl. No critical habitat has been designated for these species, therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of ESA, as amended, prohibit taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. 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. Harass is defined as 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 any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. 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 terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The National Park Service has a continuing duty to regulate the activity covered by this incidental take statement. If the National Park Service (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service anticipates incidental take of lesser long-nosed bats will be difficult to detect because the species is wide-ranging, crepuscular, has small body size; finding a dead or impaired specimen is unlikely; losses may be masked by seasonal fluctuations in numbers; and the species occurs in habitat that makes detection difficult. However, the following level of take of this species can be anticipated. Take is expected to occur if unauthorized human disturbance of the roost occurs. If, through continuing monitoring efforts, the Park Service discovers that at least one unauthorized entry to the roost has occurred, then re-initiation regarding this project is required.

The Service anticipates incidental take of Sonoran pronghorns will be difficult to detect because the species is wide-ranging; finding a dead or impaired specimen is unlikely; losses may be masked by seasonal fluctuations in numbers; and the species is sparsely distributed in habitat that makes detection difficult. However, the following level of take of this species can be anticipated. Injury or death of Sonoran pronghorn associated with traffic on State Route 85 can be expected to occur. In the event that at least one Sonoran pronghorn is injured or killed due to traffic using State Route 85, then re-initiation regarding this project is required.

The Service anticipates incidental take of cactus ferruginous pygmy-owls will be difficult to detect because species numbers are extremely low and harassment is difficult to document. The Service anticipates 15 instances of incidental take of cactus ferruginous pygmy-owls through harassment of individuals nesting or foraging in the area during the life of the project. If, through continuing mooitoring efforts, the Park Service discovers that this level is exceeded, then re-initiation regarding this project is required.

If, during the course of the action, the amount or extent of the incidental take anticipated is exceeded, the Park Service must reinitiate consultation with the Service immediately to avoid violation of section 9. Operations must be stopped in the interim period between the initiation and completion of the new consultation if it is determined that the impact of the additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(i). An explanation of the causes of the taking should be provided to the Service.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the lesser long-nosed bat and the Sonoran pronghorn or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of lesser long-nosed bats:

1. Monitoring of the roost for presence and abundance of bats as well as for detection of unauthorized human disturbance will continue.

2. Existing structures intended to prevent unauthorized human disturbance will be maintained and improved as necessary.

3. No bat gates will be installed at the roost until it is clearly appropriate to do so.

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of Sonoran pronghorn:

4. The Park Service will work with other agencies to develop and implement appropriate actions to reduce the effects of current and future traffic patterns on State Route 85 on Sonoran pronghorn.

5. The fences along the borders of the Monument will be modified to better facilitate passage of Sonoran pronghorn through them.

6. The Park Service will educate motorists about the vulnerability of Sonoran pronghorn to traffic.

7. The Park Service will monitor use and restrict access where necessary to minimize the potential for disturbance to Sonoran pronghorn.

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of cactus ferruginous pygmy-owls:

8. The feasibility study must evaluate the effects of human presence on pygmy-owls in the Alamo Canyon campground.

9. If pygmy-owls are detected along trails or other visited sites, the Park Service and the Service will cooperatively establish closure areas on a case-by-case basis.

10. If the presence of pygmy-owls becomes common public knowledge and pygmy-owls are being harassed, interpretive media will be developed and implemented to elicit increased awareness of the vulnerability of pygmy-owls on the Monument.

11. The effects of human visitation to Alamo Canyon Wash on the pygmy-owl must be monitored for the life of the project.

The Federal agency (or designated applicant or contractor) as part of their action will provide a means to determine the level of incidental take that actually results from the project.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the National Park Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above for the lesser long-nosed bat. These terms and conditions are nondiscretionary.

1. Terms and conditions for reasonable and prudent measure 1:

   The Park Service will continue to monitor the roost to determine the presence and abundance of, and any disturbance to, lesser long-nosed bats. In addition, the roost will be regularly examined for evidence of unauthorized human entry year-round.

2. Terms and conditions for reasonable and prudent measure 2:

   Existing fences will be regularly inspected and maintained promptly to ensure prevention of unauthorized entry. The Park Service will consider improvements to the fences and, if reasonable, they will be made. If unauthorized entry is discovered, improvements to the fences, or other appropriate exclusion devices, will be implemented.

3. Terms and conditions for reasonable and prudent measure 3:

   No bat gates will be installed at the roost prior to completion of experimental gate studies that will soon be conducted at Coronado National Memorial. If that study results in an appropriate gate design and a bat gate is needed at the roost, then no gates will be installed prior to further consultation with the Service.

In order to be exempt from the prohibitions of section 9 of the Act, the National Park Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above for the Sonoran pronghorn. These terms and conditions are nondiscretionary.

4. Terms and conditions for reasonable and prudent measure 4:

   a. The Park Service will work with the Arizona Department of Transportation to establish a program to explore measures to reduce the impacts of traffic speed and volume along State Route 85 on Sonoran pronghorn.

   b. The Park Service will continue to serve as a member of the Sonoran Pronghorn Core Working Group and will implement activities outlined in the Recovery Plan, including development of a monitoring program.

5. Terms and conditions for reasonable and prudent measure 5:

Fences existing along the borders of the Monument will be modified and maintained so that there is at least 18 inches between the ground and the first wire, which will be smooth.

6. Terms and conditions for reasonable and prudent measure 6:

A variety of interpretive media will be developed and implemented to elicit an increased awareness of the presence and vulnerability of Sonoran pronghorn along State Route 85. Techniques to be employed will include the use of signs along the corridor and wayside exhibits at the north and south ends.

7. Terms and conditions for reasonable and prudent measure 7:

To reduce the potential for adverse impacts on Sonoran pronghorn resulting from increased use by park visitors, illegal aliens, and other activities throughout the Monument, the Park Service will monitor all use and restrict access where necessary to minimize the potential or actual disturbance of pronghorn.

In order to be exempt from the prohibitions of section 9 of the Act, the National Park Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above for the cactus ferruginous pygmy-owl. These terms and conditions are nondiscretionary.

8. Terms and conditions for reasonable and prudent measure 8:

a. The feasibility study must evaluate the effects of human presence on pygmy-owls and explore all alternatives to expanding the campground at Alamo Canyon Wash.

b. The specific components of the feasibility study must be agreed upon by both the Park Service and the Fish and Wildlife Service.

c. If the only way to determine the effects of human presence on pygmy-owls is to go off site (e.g. gather information from pygmy-owls that are or may have been impacted by human activity elsewhere in Arizona), the Park Service must continue to survey for and monitor owls present in the area extending from Alamo Well to a point approximately 1.5 miles downstream from Alamo Campground.

d. The Park Service must show the Service convincing evidence, either from Organ Pipe Monument or from elsewhere within the range of the pygmy-owl, that expanding the campground will have negligible effects on pygmy-owl occupation, foraging, breeding, and recruitment before beginning construction for additional camping capacity.

9. Terms and conditions for reasonable and prudent measure 9:

If pygmy-owls are detected along trails or other visited sites, the Park Service and the Service will cooperatively establish closure areas on a case-by-case basis.

10. Terms and conditions for reasonable and prudent measure 10:

If the presence of pygmy-owls becomes common public knowledge and pygmy-owls are being harassed, interpretive media will be developed and implemented to elicit increased awareness of the vulnerability of pygmy-owls on the Monument.

11. Terms and conditions for reasonable and prudent measure 11:

The pygmy-owls at Alamo Canyon Wash must be monitored for the life of the project to determine what short-term and long-term effects increased visitation has on habitat selection and nesting success and to implant term and condition number 9.

To the extent that this statement concludes that take of any threatened or endangered species of migratory bird will result from the agency action for which consultation is being made, the Service will not refer the incidental take of any such migratory bird for prosecution under the MBTA of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald Eagle Protection Act of 1940, as ameoded (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and /or number) specified herein.

CONSERVATION RECOMMENDATIONS

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

Lesser long-nosed bat:

1. The Park Service should coordinate with agencies and individuals knowledgeable on the ecology of nectar-feeding bats, columnar cacti, and paniculate agaves and help to implement appropriate management actions as new information becomes available.

2. Develop interpretive media to elicit increased awareness of the presence of lesser long-nosed bats on the monument and their sensitivity to human disturbance.

Sonoran pronghorn:

1. The Park Service should continue to contribute to multi-agency recovery effects and help to implement appropriate management actions as new information becomes available.

Cactus ferruginous pygmy-owl:

1. The Park Service should survey all suitable habitat according to protocol within the Monument boundaries.

2. In areas where pygmy-owls are detected, the Park Service should monitor those owls to determine if breeding is occurring and if so, continue to monitor all nesting activity.

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 - CLOSING STATEMENT

This concludes formal consultation on the action(s) outlined in the (request/reinitiation request). As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent oot considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered io 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.

Thank you for your continuing efforts to conserve listed species. If we can be of further assistance, please contact Bill Austin, Sheldon Plentovich, or Ted Cordery. Please refer to the consultation number 2-21-89-F-078 in future correspondence concerning this project.

Sincerely,

Sam F. Spiller
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (GM:AZ)(AES)
Superintendent, Organ Pipe Cactus National Monument, Ajo, AZ

Director, Arizona Game and Fish Department, Phoenix, AZ

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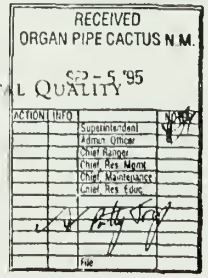
FINAL OPINION

Appendix B: Comment Letters on the Draft GMP/DCP/EIS

The National Environment Policy Act requires the NPS to print all public agency and tribal government comment letters. The letters are pirnted in this Appendix in the order they appear in the following index.

Public Agency and Tribal Government Comment Letters

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Fife Symington, Governor Edward Z. Fox, Director



September 1, 1995

Harold J. Smith, Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

RE: Draft General Management Plan/Development Concept Plans/ Environmental Impact Statement (EIS) for Organ Pipe Cactus National Monument

Dear Mr. Smith:

Thank you for your letter of August 18, 1995, notifying the Arizona Department of Environmental Quality (ADEQ) that a supplement to the EIS is being prepared, and will be provided to ADEQ for review and comment when completed. Since the supplement is still being formulated, please consider the following comments, which incorporate non-point source pollution prevention, urban run-off, and other water quality concerns.

Specific Comment

1 Trail and campsite improvements during construction as well as post-construction should include soil erosion prevention safeguards, to preveot sediment transport from the site. Design criteria should incorporate soil compaction techniques, and prevent sediment transport due to pedestrian traffic, water and wind erosion;

General Comments

2. Best management practiccs (BMPs) should be implemented during and after all construction phases to protect watershed condition and riparian areas, to maintain adequate vegetative cover, and to minimize the discharge of sediment, petroleum, nutrients, bacteria and other pollutants to the watershed or to all waters of the state/waters of the U.S., and that any such discharge meet all applicable water quality standards;

3. BMPs should be implemented to ensure that mechanical equipment minimizes ground disturbance during construction activities;

4. A monitoring program should be implemeoted to evaluate the effectiveness of BMPs in protecting watershed condition and waters of the state;

3033 North Central Avenue, Phoenix, Arizona 85012, (602)207-2300

5. Public or semi-public water supply systems should be developed to comply with the Arizona Administrative Code (A.A.C.) R-18-4-201 et seq., Public and Semipublic Water Supply Systems rules. For assistance, contact the ADEQ Program Development & Outreach Unit, at (Arizona toll free) 800-234-5677, ext. 4643;

6. If any gasoline lines or underground storage tanks (USTs) containing petroleum products are moved, the lines have to be tested and recertified, and the USTs would have to be closed. Contact the ADEQ UST Section, Inspections & Compliance Unit at (Arizona toll free) 800-234-5677, ext. 4329, for changes in the notification form, including closures and installations, within thirty (30) days of that change, and owners of new USTs are required to notify ADEQ within 30 days of bringing the USTs into operation. The information required on the form includes, but is not limited to, tank age, size, type, location and use. A guidance document for completing the Notification form is also available. [Note: Public Law 99-499 requires disclosure of hazardous chemicals].

7. Any new or modified water and/or waste water facility must be designed to protect public health and the environment through a construction approval program, that ensures that proposed plans and specifications for constructiou comply with ADEQ sanitation rules, engineering guidelines and policies, and can be constructed. Contact the ADEQ Water Quality Division, Engineering Review Desk at (Arizona toll free) 800-234-5677, ext. 4677, regarding an Approval to Construct Certificate.

8. Facilities that dispose pollutants to the land surface, the underlying soil, or to groundwater, may also be required to obtain an Aquifer Protection Permit (APP), in order to prevent groundwater contamination, where there would otherwise be a reasonable probability that the pollutants would reach groundwater. Contact the ADEQ Water Quality Division, Aquifer Protection Program Section at (Arizona toll free) 800-234-5677, ext. 4682, for a *Determination of Applicability* form, if there is any question regarding whether an APP would be required.

9. Sanitary waste facilities provided during construction phases, should be planned and developed in such a manner to ensure protection of both surface and groundwater resources;

10. A Clean Water Act, Section 402, National Pollutant Discharge Elimination System permit is required for all ground disturbing activities which exceed 5 acres in impact. Contact the ADEQ Surface Water Quality Section at (Arizona toll free) 800-234-5677, ext. 4494, regarding assistance in applying for this federal permit.

11. A Clean Water Act, Section 404 Permit may be required for the discharge of fill and the excavation of material from the waters of the state, as well as underlying and adjacent land, including all perennial or intermittent streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, aquifers, springs, irrigation systems, drainage systems and other bodies or accumulations of surface, uoderground, natural, artificial, public or private water situated wholly or partly in or bordering on the state, from pollutants discharged from a point source. Contact the U.S. Army Corps of Engineers at (602) 640-5385, to determine whether a permit is needed. Although these permits are administered jointly by the U.S. Army Corps of Engineers and EPA, ADEQ must review the proposed project for compliance with state water quality standards. A Section 401 State Water Quality Certification from ADEQ is required for all federal permits. If, after review of the project, compliance is demonstrated, ADEQ issues a Water Quality Certification Letter. If not, additional information or project redesign will be required before ADEQ can issue its certification. Coordination with ADEQ and the U.S. Army Corps of Engineers is recommended early in the project planning phase.

12. Numeric water quality standards listed in A.A.C. R18-11-109.G. must be complied with. Enclosed for your information and reference, is a copy of the A.A.C. R18-11-107, 108 and 109 water quality standards for navigable waters.

Thank you for considering these comments. ADEQ will provide additional comments within the 60-day period that will be provided when the supplement is transmitted. Should you have any questions concerning these comments, please contact Karl Meyer at (Arizona toll free) 800-234-5677, ext. 4535.

Sincerely,

Alan L. Roesler

Alan L. Roesler
Ombudsman

ALR:KFM:urb

Enclosure

cc: Karl Meyer, ADEQ Non-Point Source Unit

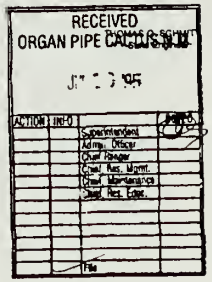
ARIZONA DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION - Tucson District Office
1221 South 2nd Avenue - Tucson, Arizona 85713-1602

FIFE SYMINGTON
Governor

LARRY S. BONINE
Director

July 7, 1995



Mr. Harold J. Smith, Supenntendent
U. S. Department of the Interior
National Park Service
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo AZ 85321

Dear Mr. Smith:

The General Management Plan for the Organ Pipe Cactus National Monument has been reviewed by the Arizona Department of Transportation.

The Department is very concerned about the transportation system, particularly SR 85, as it dissects the Monument The Department will set the speed limits of this route as it is within our jurisdiction. We will work with the National Park Service as far as widening and interpretative pull outs are concerned At this time, the Department does not have plans to reduce the speed limit.

Should your long range plan to relocate State Route 85 come to fruition, the Department is unable to provide any funding for your relocation project. However, if the National Park Service continues to pursue this project, we can assist with the planning aspect. Nevertheless, the funding for the relocation and for the establishment of a new border crossing would be borne by others.

Sincerely,

William J. Higgins, P.E.
Tucson Distnct Engineer

WJH:dlo

c: John Louis
Del Beesley
Tom Schmitt
Robert Johnson

G. In designating uses of a navigable water and in establishing water quality criteria to protect those designated uses, the Director shall take into consideration the applicable water quality standards for downstream navigable waters and shall ensure that the water quality standards provide for the attainment and maintenance of the water quality standards of downstream navigable waters.

H. A use attainability analysis shall be conducted prior to removal of a designated use or adoption of a subcategory of a designated use that requires less stringent water quality criteria.

I. The Director may remove a designated use or adopt a subcategory of a designated use that requires less stringent water quality criteria provided the designated use is not an existing use and it is demonstrated through a use attainability analysis that attaining the designated use is not feasible for any of the following reasons:
1. Naturally occurring pollutant concentrations prevent the attainment of the use;
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of a sufficient volume of treated wastewater without violating water conservation or other applicable requirements. Nothing herein shall be construed to require releases of treated wastewater;
3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the navigable water to its original condition or to operate such modification in a way that would result in attainment of the use. Nothing herein shall be construed to require the releases of water from dams;
5. Physical conditions related to the natural features of the navigable water, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life designated uses; or
6. Controls more stringent than those required by §§ 301(b) and 306 of the Clean Water Act are necessary to attain the use and implementation of such controls would result in substantial and widespread economic and social impact.

Historical Note
Adopted effective February 18, 1992 (Supp. 92-1).

R18-11-105. Reserved

R18-11-106. Reserved

R18-11-107. Antidegradation

A. The determination of whether there is any degradation of water quality in a navigable water shall be on a pollutant-by-pollutant basis.

B. The level of water quality necessary to protect existing uses shall be maintained and protected. No degradation of existing water quality is permitted in a navigable water where the existing water quality does not meet applicable water quality standards.

C. Where existing water quality in a navigable water is better than applicable water quality standards, the existing water quality shall be maintained and protected. The Director may allow limited degradation of existing water quality in such navigable waters, except unique waters, provided that the Department has held a public hearing on whether degradation should be allowed pursuant to the general public hearing procedures prescribed at R18-1-401 and R18-1-402 and the Director makes all of the following findings:
1. The level of water quality necessary to protect existing uses is fully protected.
2. The highest statutory and regulatory requirements for all new and existing point sources as set forth in the Clean Water Act are achieved.
3. All cost-effective and reasonable best management practices for nonpoint source control are implemented.
4. Allowing lower water quality is necessary to accommodate important economic or social development in the area in which the navigable water is located.

D. Existing water quality shall be maintained and protected in a navigable water that is classified as a unique water or that the Director has proposed for classification as a unique water pursuant to A.A.C. R18-11-112. The Director shall not allow limited degradation of a unique water pursuant to subsection (C) of this Section.

E. Nothing in this Section or in the implementation of this Section shall be inconsistent with § 316 of the Clean Water Act where a potential water quality impairment associated with a thermal discharge is involved.

Historical Note
Adopted effective February 18, 1992 (Supp. 92-1).

R18-11-108. Narrative water quality standards

A. Navigable waters shall be free from pollutants in amounts or combinations that:
1. Settle to form bottom deposits that inhibit or prohibit the habitation, growth or propagation of aquatic life or that impair recreational uses;
2. Cause objectionable odor in the area in which the navigable water is located;
3. Cause off-taste or odor in drinking water;
4. Cause off-flavor in aquatic organisms or waterfowl;
5. Are toxic to humans, animals, plants or other organisms;
6. Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth or propagation of other aquatic life or that impair recreational uses;
7. Cause or contribute to a violation of an aquifer water quality standard prescribed in A.A.C. R18-11-405 or R18-11-406; or
8. Change the color of the navigable water from natural background levels of color.

B. Navigable waters shall be free from oil, grease and other pollutants that float as debris, foam, or scum; or that cause a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank or aquatic vegetation. The discharge of lubricating oil or gasoline associated with the normal operation of a recreational watercraft shall not be considered a violation of this narrative standard.

Historical Note
Adopted effective February 18, 1992 (Supp. 92-1).

R18-11-109. Numeric water quality standards

A. The water quality standards prescribed in this Section and in Appendix A apply to navigable waters listed in Appendix B and their tributaries. Additional numeric water quality standards for unique waters are prescribed in R18-11-112.

B. The following water quality standards for fecal coliform, expressed in colony forming units per 100 milliliters of water (cfu/100 ml), shall not be exceeded.

	FBC	DWS, PBC, A&W[1], Agl, Agl
1. Fecal Coliform		
30-day geometric mean		
(5 sample minimum)	200	1000
10% of samples for		
a 30-day period	400	2000
Single sample maximum	800	4000

	All designated uses
2. Fecal coliform in effluent dominated waters	
30-day geometric mean	
(5 sample minimum)	200
10% of samples for a	
30-day period	400
Single sample maximum	800

C. The following water quality standards for pH, expressed in standard units, shall not be violated:

pH	DWS	FBC, PBC, A&W[2]	Agl	Agl
Maximum	9.0	9.0	9.0	9.0
Minimum	5.0	6.5	4.5	6.5
Maximum change due to discharge	NNS	0.5	NNS	NNS

D. The following maximum allowable increase in ambient water temperature, expressed in degrees Celsius, shall not be exceeded:

Temperature[3]	A&Ww, A&Wedw	A&Wc
Maximum increase due to a discharge[4,5]	3.0	1.0

E. The following water quality standards for turbidity, expressed as a maximum concentration in nephelometric turbidity units (NTU), shall not be exceeded:

Turbidity	FBC, PBC, A&Ww, A&Wedw	A&Wc
Rivers, streams and other flowing waters	50	10
Lakes, reservoirs, tanks and ponds	25	10

F. The following are the water quality standards for dissolved oxygen, expressed in milligrams per liter (mg/L). The dissolved oxygen concentration in a navigable water shall not fall below the following minimum concentrations:

Dissolved oxygen[6]	A&Ww	A&Wc	A&Wedw
Single sample minimum[7,8]	6.0	7.0	1.0

G. *The following water quality standards for total phosphorus and total nitrogen, expressed in milligrams per liter (mg/L), shall not be exceeded:*

	Annual mean	90th percentile	Single Sample Maximum
Verde River and its tributaries from headwaters to Bartlett Lake			
Total phosphorus	0.10	0.30	1.00
Total nitrogen	1.00	1.50	3.00
White River, Black River, Tonto Creek and their tributaries			
Total phosphorus	0.10	0.20	0.80
Total nitrogen	0.50	1.00	2.00
Salt River and its tributaries, except Pinal Creek, from the confluence of the White and Black Rivers to Theodore Roosevelt L.			
Total phosphorus	0.12	0.30	1.00
Total nitrogen	0.60	1.20	2.00
Theodore Roosevelt, Apache, Canyon and Saguaro Lakes			
Total phosphorus	0.03[9]	NNS	0.60[b]
Total nitrogen	0.30[9]	NNS	1.00[b]
Salt River below Stewart Mountain Dam to confluence with the Verde River			
Total phosphorus	0.05	NNS	0.20
Total nitrogen	0.60	NNS	3.00
Little Colorado River and its tributaries above River Reservoir in Greer; South Fork of Little Colorado River above South Fork Campground; Water Canyon Creek above Apache-Sitgreaves National Forest boundary			
Total phosphorus	0.08	0.10	0.75
Total nitrogen	0.60	0.75	1.10
Little Colorado River at crossing of Apache County Road No. 124			
Total phosphorus	NNS	NNS	0.75
Total nitrogen	NNS	NNS	1.80
Little Colorado River above Lyman Lake to above Amity Ditch diversion near crossing of Arizona Highway 273 (applies only when in-stream turbidity is less than 50 NTU)			
Total phosphorus	0.20	0.30	0.75
Total nitrogen	0.70	1.20	1.50

COMMENTS

Colorado River, at Northern International Boundary near Morelos Dam			
Total phosphorus	NNS	0.33	NNS
Total nitrogen	NNS	2.50	NNS
San Pedro River, from Curtiss to Benson			
Total phosphorus	NNS	NNS	NNS
Total nitrate as N	NNS	NNS	10.0

H. The following water quality standards for radiochemicals shall not be exceeded:
1. In all navigable waters, the concentration of radiochemicals shall not exceed the limits established by the *Arizona* Radiation Regulatory Agency in Title 12, Chapter 1, Article 4, Appendix A, Table II, Column 2 of the Arizona Administrative Code, (effective June 30, 1977, and no future amendments), which is incorporated by reference and on file with the Office of the Secretary of State and with the Department.
2. In navigable waters that are designated as domestic water sources, the following water quality standards for radiochemicals shall not be exceeded:
   a. The concentration of gross alpha particle activity, including radium-226 but excluding radon and uranium, shall not exceed 15 picocuries per liter of water.
   b. The concentration of combined radium-226 and radium-228 shall not exceed 5 picocuries per liter of water.
   c. The concentration of strontium-90 shall not exceed 8 picocuries per liter of water.
   d. The concentration of tritium shall not exceed 20,000 picocuries per liter of water.
   e. The average annual concentration of beta particle activity and photon emitters from man-made radionuclides shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirems per year.

Footnotes:
1 Includes A&Wc, A&Ww and A&We.
2 Includes A&Wc, A&Ww, A&Wedw and A&We.
3 There is no water quality standard for temperature for the A&We designated use.
4 Does not apply to Cholla Lake.
5 Does not apply to a wastewater treatment plant discharge to a dry watercourse that creates an effluent dominated water.
6 There is no dissolved oxygen standard for the A&We designated use.
7 Or 90% saturation, whichever is less.
8 The dissolved oxygen water quality standard for a lake shall apply below the surface but not at a depth greater than 1 meter.
a means annual mean of representative composite samples taken from the surface and at 2- and 5-meter depths.
b means maximum for any set of representative composite samples taken from the surface and at 2- and 5-meter depths.
"NNS" means no numeric standard.

Historical Note
Adopted effective February 18, 1992 (Supp. 92-1).

R18-11-110. Salinity of the Colorado River
The flow-weighted average annual salinity in the lower main stem of the Colorado River shall be maintained at or below the following concentrations:

Location	Total Dissolved Solids
Below Hoover Dam	723 mg/L
Below Parker Dam	747 mg/L
At Imperial Dam	879 mg/L

Historical Note
Adopted effective February 18, 1992 (Supp. 92-1).

R18-11-111. Analytical Methods
A. Analysis of a sample taken to determine compliance with a water quality standard shall be in accordance with an approved analytical method prescribed in Title 9, Chapter 14, Article 6 of the Arizona Administrative Code or an alternative analytical method that is approved by the Director of the Department of Health Services pursuant to A.A.C. R9-14-607(B).
B. A test result from a sample taken to determine compliance with a water quality standard shall be valid only if the sample has been analyzed by a laboratory that is licensed by the Arizona Department of Health Services for the analysis performed.

Historical Note
Adopted effective February 18, 1992 (Supp. 92-1).

R18-11-112. *Unique waters*
A. The classification of a navigable water as a unique water shall be by rule.
B. The Director may adopt, by rule, site-specific water quality standards to maintain and protect existing water quality in a unique water.
C. Any person may nominate a navigable water for classification as a unique water by filing a petition for rule adoption with the Department. A petition for rule adoption to classify a navigable water as a unique water shall include:
1. A map and a description of the navigable water;
2. A written statement in support of the nomination, including specific reference to the applicable criteria for unique waters classification as prescribed in subsection (D) of this Section;
3. Supporting evidence demonstrating that one or more of the applicable unique waters criteria prescribed in subsection (D) of this Section has been met; and
4. Relevant water quality data.

D. A navigable water may be classified as a unique water by the Director upon a finding that the navigable water is an outstanding state resource water based upon one of the following criteria:
1. The navigable water is of exceptional recreational or ecological significance because of its unique attributes, including, but not limited to, attributes related to the geology, flora, fauna, water quality, aesthetic values or the wilderness characteristics of the navigable water.
2. Threatened or endangered species are known to be associated with the navigable water and the existing water quality is essential to the maintenance and propagation of a threatened or endangered species or the navigable water provides critical habitat for a threatened or endangered species. Endangered or threatened species are identified on the following lists which are hereby incorporated by reference and on file with the Office of the Secretary of State and with the Department:
   a. *Endangered and Threatened Wildlife and Plants*, 50 CFR 17.11 and 17.12 (revised as of July 15, 1991);
   b. *"Threatened Native Wildlife of Arizona," Arizona* Game and Fish Department (July 21, 1988);

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000

RECEIVED
ORGAN PIPE CACTUS N.M.
AUG 30 '95

ACTION	INFO		
		Superintendent	
		Admin. Officer	
		Chief Ranger	
		Chief Res. Mgmt.	
		Chief Maintenance	
		Chief Res. Educ.	
		File	

August 29, 1995

Mr. Harold J. Smith, Superintendent
Organ Pipe Cactus National Monument
National Park Service
Route 1, Box 100
Ajo, Arizona 85321

Re: Draft General Management Plan/Development Concept Plans/Environmental Impact Statement for Organ Pipe Cactus National Monument

Dear Mr. Smith:

The Arizona Game and Fish Department (Department) has not completed our review of the above-referenced Draft Environmental Impact Statement (DEIS). The Department apologizes for the delay in our response to your original request to review this document. The following cursory comments are provide for your consideration.

It is the Department's understanding that the National Park Service has decided to develop a supplement to the DEIS. Substantive changes to the original alternatives are expected. In addition, the supplement will address several new issues and management actions. For these reasons, the Department will provide specific comments on the DEIS during the formal review period for the supplement.

In general, the Department believes that the DEIS, as written, does not adequately describe specific potential impacts associated with the alternatives presented. The Department recommends that potential impacts associated with the following issues and/or proposed actions be evaluated and included in the DEIS:

- Potential impacts to wildlife associated with proposed actions at Quitobaquito. For example, eliminating the trampled areas at the Quitobaquito ponds may adversely impact wildlife species (e.g., coyote, bobcat, deer, Sonoran pronghorn) that use the ponds as a water source. The Sonoran mud turtle may also prefer at least some vegetation free shoreline. In addition, potential impacts associated with developing a new access trail in the Quitobaquito area should be evaluated.

- Establishing more foot trails and camping areas, including a new, maintained trail into Alamo Canyon.

Mr. Harold J. Smith
August 29, 1995
2

- Increased visitor use of Alamo campground (due to expansion).

- Increased use of the Bull Pasture Trail (due to new signage).

The Department is interested in participating in agency meetings to discuss wildlife related issues identified in the DEIS and associated supplement. We look forward to working closely with the affected agencies to ensure that wildlife resource issues and management opportunities are adequately addressed. If you have any questions, please contact myself at (520) 342-0091, or Mr. Ron Christofferson, Project Evaluation Coordinator, at (602) 789-3605.

Sincerely,

Ron Christofferson
for John Kennedy
Regional Habitat Program Manager

JK:jk

cc: John Hervert, Acting Regional Supervisor, Region IV

AGFD# 4-27-95(06)

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000

June 19, 1996

Mr. Harold J. Smith
Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

Re: Supplement to the Draft General Management Plan, Development Concept Plans, Environmental Impact Statement; Organ Pipe Cactus National Monument (Monument), National Park Service (Service)

Dear Mr. Smith:

The Arizona Game and Fish Department (Department) has reviewed the above-referenced document, released March 25, 1996. The Department regrets the delay in our response. We appreciate the Service's efforts to address issues identified in our previous letter of August 29, 1995. The following comments are provided for your consideration.

GENERAL COMMENTS

- The Department supports the new, redesigned Quitobaquito development plan, as described on Page S-39.

- Regarding new trails and campgrounds, the Department commends the evaluation of potential impacts to wildlife at the Alamo Canyon campground. The Department requests the opportunity to evaluate these developments on a case-by-case basis when more detailed plans become available.

- The majority of roadkills and wildlife observations appear to occur where State Route 85 intersects mountainous outcrops and major washes. Along SR 85, there are five locations that generally fit this description. We recommend targeting these areas for new culverts or modified culvert designs. Educational signs and a reduction in vehicle speeds in these areas also is anticipated to reduce the number of roadkills.

- The Department supports the proposal to install bat-accessible gates in bat maternity areas near Alamo Canyon (page S-83). These gates, along with informative signs, can be effective management tools to prevent disturbances of bat habitat.

- The Department would appreciate the opportunity to participate in multi-agency work groups, such as those described for SR 85 corridor planning efforts, and for the preparation of a Wilderness Management Plan for the Organ Pipe Cactus Wilderness.

PAGE-SPECIFIC COMMENTS

Page S-16, Wildlife Management

Similar to wording in the section on Threatened, Endangered and Sensitive Species (Page S-17), the Department recommends that other wildlife management actions on the Monument also be coordinated with our agency.

Page S-81, Sonoran Pronghorn

Because Quitobaquito Springs could be a water source for Sonoran pronghorn, the Department recommends that this section address any potential impacts to pronghorn resulting from implementation of the Quitobaquito plan.

Page S-83, Cactus Ferruginous Pygmy Owl

It is stated in this section that the last known occurrence of cactus ferruginous pygmy-owl was in 1993. We request that this information be updated to include two observations from 1995 and three observations from 1996, as identified by Monument staff.

Thank you for the opportunity to provide these comments. If you have any questions, please contact Mr. John Kennedy, Yuma Regional Habitat Program Manager, at (520) 342-0091.

Sincerely,

Ron Christofferson

Ron Christofferson
Project Evaluation Coordinator
Habitat Branch

RAC:NLO:no

cc: Larry Voyles, Regional Supervisor, Region IV, Yuma
Terry Johnson, Chief, Nongame Branch

AGFD# 4-08-96(13)

ARIZONA PUBLIC SERVICE COMPANY
Phoenix, Arizona
Filed by: R. Paul Hart
Title: Vice President, Rates and Regulation

A.C.C. No. 4343
Cancelling A.C.C. No. 4239
Revision No. 7
Effective: November 1, 1986

Filed: October 21, 1986
Page 1 of 3

SCHEDULE #3

CONDITIONS GOVERNING EXTENSIONS OF ELECTRIC DISTRIBUTION LINES AND SERVICES

Application for Company's electric service often involves construction of new facilities for various distances and costs depending upon Customer's location, load size, and load characteristics. With such variations, it is necessary to establish conditions under which Company will extend its facilities.

All extensions are made on the basis of economic feasibility. Footage and revenue basis are offered below for use in circumstances where feasibility is generally accepted because of the number of extensions made within these footage and dollar limits.

All extensions are subject to the availability of adequate capacity, voltage and company facilities at the beginning point of an extension, as determined by Company.

The following policy governs the extension of overhead electric facilities, and underground facilities as specified in Section 4., to customers whose requirements are deemed by Company to be usual and reasonable in nature.

1. FOOTAGE BASIS - RESIDENTIAL ONLY

1.1 GENERAL POLICY - Footage basis extensions may be made only if all of the following conditions exist:

1.1.1 Applicant will be a new permanent residential Customer or group of new permanent residential Customers. Customers specified in 4 are not eligible for this basis.

1.1.2 The total extension does not exceed 2,000 feet per Customer and under no circumstance can the total allowable distance exceed 10,000 feet.

1.1.3 No footage will be permitted beyond the shortest practical route to the nearest practical point of delivery on each Customer's premises as determined by Company.

1.1.4 Such extension does not exceed a total construction cost of $25,000.

1.2 FREE EXTENSIONS - May be made if the conditions specified in 1.1 are met and:

1.2.1 Such free extension will be limited to a maximum of 1,000 feet per new permanent residential Customer.

1.2.2 Free allowance for the total extension will be 1,000 feet per Customer regardless of Customer's location along the route of extension.

1.3 EXTENSIONS OVER THE FREE DISTANCE

For extensions which meet the conditions specified in 1.1, above, and which exceed the free distance specified in 1.2.1, Company may extend its facilities up to the maximum allowed in 1.1.2 provided Customer or Customers will sign an extension agreement and advance the cost of such additional footage. Advances are subject to refund as specified in 5.

2. REVENUE BASIS

2.1 GENERAL POLICY - Revenue basis extensions may be made only if all of the following conditions exist:

2.1.1 Applicant is or will be a permanent Customer or group of permanent Customers. Customers specified in 4.1, 4.2, or 4.3 not eligible for this basis.

2.1.2 Such extension does not exceed a total construction cost of $25,000.

2.2 FREE EXTENSIONS

Such extension shall be free to Customer where the conditions specified in 2.1 are met and the estimated annual revenue multiplied by two (2) is equal to or greater than the total construction cost less nonrefundable Customer contributions.

2.3 EXTENSIONS OVER THE FREE LIMITS

For extensions which meet the conditions specified in 2.1, above, and which exceed the free limits specified in 2.2, Company may extend its facilities up to a cost limitation of $25,000, provided Customer or Customers will sign an extension agreement and advance a sufficient portion of the construction cost so that the remainder satisfies the requirements of 2.2. Advances are subject to refund as specified in 5.

3. ECONOMIC FEASIBILITY BASIS

3.1 GENERAL POLICY - Economic feasibility basis extensions may be made only if all of the following conditions exist:

3.1.1 Applicant is or will be a permanent Customer or group of permanent Customers. Customers specified in 4.1, 4.2, or 4.3 are eligible for this basis.

3.1.2 The total construction cost exceeds $23,000 except for extensions specified in 4.4 or 7.7.

3.2 FREE EXTENSIONS

Such extensions shall be free to Customer where the conditions specified in 3.1 are met and the extension is determined to be economically feasible. Economic feasibility, as used in this policy, shall mean a determination by Company that the revenue less the cost of service provides an adequate rate of return on the investment made by Company to serve Customer.

3.3 EXTENSIONS OVER THE FREE LIMITS

For extensions which meet the conditions specified in 3.1, above, Company, after special study and at its option, may extend its facilities to Customers whose use does not satisfy the definition of economic feasibility as specified in 3.1, provided such Customers sign an extension agreement and advance an amount of the construction cost and/or agree to pay such higher special rate (facilities charge) as is required to make the extension economically feasible. Advances are subject to refund as specified in 5.

4. OTHER CONDITIONS

4.1 IRRIGATION CUSTOMERS

Customers requiring construction of electric facilities for service to irrigation pumping will advance the total construction cost, which may include a portion of the shared backbone cost from designated irrigation substations, less the first $500 of construction or one block span for Customers owning their own transformers. Advances are subject to refund as specified in 5.

4.2 TEMPORARY CUSTOMERS

4.2.1 Where a temporary meter or construction is required to provide service to Customer, then Customer, in advance of installation or construction, shall make a contribution equal to the cost of installing and removing the facilities required to furnish service, less the salvage value of such facilities. When the use of service is discontinued or agreement for service is terminated, Company may dismantle its facilities and the materials and equipment provided by Company will be salvaged and remain its property.

4.2.2 Contributions for temporary service are nonrefundable.

4.3 DOUBTFUL PERMANENCY CUSTOMERS

When, in the opinion of Company, permanency of Customer's service is doubtful, Customer will be required to advance the total construction cost. Advances are subject to refund as specified in 5.

4.4 REAL ESTATE DEVELOPMENT

Extensions of electric facilities within real estate developments including residential subdivisions, industrial parks, mobile home parks, apartment complexes, planned area developments, etc., may be made in advance of application for service by permanent Customers, as specified in 3. Anticipated revenue for Residential Real Estate extensions under the Revenue basis or Economic Feasibility basis shall not be differentiated as between all electric or dual energy service.

4.4.1 MOBILE HOME PARKS - Company shall refuse service to all new construction and/or expansion of existing permanent residential mobile home parks unless the construction and/or expansion is individually metered by the utility as stated in R14-2-305 of Corporation Commission's Administrative Rules and Regulations.

4.4.2 RESIDENTIAL APARTMENT COMPLEXES, CONDOMINIUMS AND OTHER MULTI UNIT RESIDENTIAL BUILDINGS - Company shall refuse service to all new construction and/or expansion of apartment complexes and condominiums unless the construction and/or expansion is individually metered by the utility as stated in R14-2-203 of Corporation Commission's Administrative Rules and Regulations. Master metering will only be allowed for buildings utilizing centralized heating, ventilation and/or air conditioning system where the contractor can provide an analysis demonstrating that the central unit will result in a favorable cost/benefit relationship as stated in R14-2-203 of Corporation Commission's Administrative Rules and Regulations.

4.5 SEASONAL CUSTOMERS

Extensions of electric facilities to Customer's premises which will be continuously occupied less than 9 months out of each 12 month period may be made only on the basis specified in 2. or 3.

5. REFUNDS

5.1 FOOTAGE, REVENUE, AND ECONOMIC FEASIBILITY BASIS REFUNDS

5.1.1 Customer advances of over $50.00 are subject to full or partial refund, provided that a survey based on conditions of the extension - not including laterals or extensions from the extensions being surveyed as specified in 5.1.2 existing at the time of survey results in an advance lower than the amount actually advanced. Except as provided for in 5.3, such surveys shall not be made for customers extended to under the basis specified in 4.1, 4.2, or 4.3. A survey will be conducted by Company under the extension policy in force at the time of the extension and will be made five (5) years after signing the extension agreement. Upon request, Customer will be entitled to intermediate surveys within the five (5)

year period after the end of six (6) months following the date of signing the extension agreement and subsequent surveys at intervals of not less than one (1) year thereafter. Company will refund the difference between amount advanced and the amount that would have been advanced had the advance been calculated at the time of survey. In no event shall the amount of any refund exceed the amount originally advanced.

5.1.3 Laterals or extensions from an extension being surveyed shall not be considered in the survey when the lateral or extension was extended on the basis "extensions over the free limits" of 1, 2, or 3, or is over 500 feet in length or is not connected directly to the extension being surveyed. In real estate developments extended to under the basis specified in 4.4, the survey may include laterals and extensions to serve permanent customers located within the real estate development described in the extension agreement for the extension being surveyed.

5.1.5 In lieu of surveys Company will determine the refund based on the number of permanent connections to the extension for residential real estate development. In such event, Company shall specify in the extension agreement the amount of refund per permanent Customer connection.

5.2 REFUNDS FOR EXTENSIONS TO IRRIGATION CUSTOMERS

5.2.1 Customer advances of over $50.00 are subject to refund of twenty-five (25) Percent of the annual accumulation of twelve (12) monthly bills in excess of the annual minimum bill, for service to the irrigation pump specified in the agreement for the extension being surveyed, commencing with the date of signing the agreement.

5.2.2 Customer advances on irrigation extensions over one (1) mile in length will be entitled to an additional refund in the event Company extends service to another irrigation Customer (hereinafter called "new applicant") from such extension. Computations for the refund, as specified in the extension agreement, shall be based on the advance applicable to common facilities used to serve Customer and new applicant or applicants and the number of new applicants. The amount of any refund to Customer shall be collected as a portion of the advance from new applicant. For the purpose of determining refunds to the original Customer, no more than one (1) new applicant per whole mile of original extension will be considered.

5.3 REFUNDS TO CUSTOMERS OF DOUBTFUL PERMANENCY

Customer advances of over $50.00 are subject to full or partial refund pursuant to surveys based on the Revenue or Economic Feasibility basis as specified in 5.1.1. In no event shall the refund exceed twenty-five (25) percent of the annual accumulation of twelve (12) monthly bills in excess of the annual minimum bill for Customer specified in the extension agreement.

5.4 GENERAL REFUND CONDITIONS

5.4.1 Customer advances of $50.00 or less are not subject to refund.

5.4.2 No refund will be made to any Customer for an amount more than the unrefunded balance of Customer's advance.

5.4.3 Any unrefunded balance of Customer's advance shall become nonrefundable five (5) years from the date of Company's receipt of the advance.

5.4.4 Company reserves the right to withhold refunds to any Customer whose account is delinquent and apply these refund amounts to past due bills.

6. UNDERGROUND CONSTRUCTION

6.1 GENERAL UNDERGROUND [illegible] - With respect to all underground installations, Company may install underground facilities only if all of the following conditions are met:

6.1.1 The extension meets normal overhead feasibility requirements as specified in 1., 2., 3., or 4.

6.1.2 Customer or developer provides all earthwork including, but not limited to, trench, boring or trenching, conduits, backfill, compaction, and surface restoration in accordance with Company specifications.

(Company may provide all earthwork and Customer or developer will make a nonrefundable contribution equal to the cost of such work provided by Company.)

6.1.3 If armored cable or special cable covering is required, Customer or developer will make a nonrefundable contribution equal to the additional cost of such cable or covering.

6.2 THREE-PHASE [illegible] - Where it is determined that three phase is required to serve Customer, Company may install three-phase facilities if the conditions specified in 6.1 are met, and Customer provides the following:

6.2.1 A nonrefundable contribution per primary circuit foot equal to the estimated difference in cost between overhead and underground facilities.

6.2.2 A nonrefundable contribution for excess service footage required by Customer equal to the increased estimated cost of installed service over what would be required with a maximum 40-foot service at 480 volts and 20-foot service at 120/208 or 240 volts.

6.2.3 Transformer pad and secondary conduits in accordance with Company specifications. (Company may provide pad and conduits, and Customer or developer will make a nonrefundable contribution equal to the cost of such work provided by Company.)

6.3 NETWORK AREA

In that portion of Company's service area where the standard service is 277/480 volts from a designated underground network system, Customers who qualify for network service may be supplied standard underground service without extra charge; however, the conditions specified in 6.1 must be met and Customer will be required to make a nonrefundable contribution equal to the cost of the transformer vault where it is used primarily for Customer's benefit.

7. GENERAL CONDITIONS

7.1 VOLTAGE

The extension must be designed and constructed for operation at standard voltages used by Company in the area in which the extension is located.

7.2 THREE PHASE

Extensions for 3-phase service can be made under this extension policy where Customer has installed major 3-phase equipment. Equipment of 7-1/2 HP or more or single air conditioning units of 6 ton or more or where total HP of all connected 3-phase motors exceeds 12 HP or total load exceeding 100 KVA demand shall qualify for 3-phase. If less than the above HP or connected KVA is installed, Company may at its option, when requested by Customer, serve 3-phase and require a nonrefundable contribution equal to the difference in cost between 1-phase and 3-phase construction, but in no case less than $100.

7.3 EASEMENTS

All suitable easements or rights-of-way required by Company for any portion of the extension which is either on premises owned, leased or otherwise controlled by Customer, or other property, shall be furnished in Company's name by Customer without cost to or condemnation by Company and in reasonable time to meet proposed service requirements. All easements or rights-of-way obtained on behalf of Company shall contain such terms and conditions as are acceptable to Company.

7.4 GRADE MODIFICATIONS

If subsequent to construction of electric distribution lines and services, the final grade established by Customer or developer is changed in such a way as to require relocation of Company facilities or results in damage to such facilities, the cost of relocation and/or resulting repairs shall be borne by Customer or developer.

7.5 OWNERSHIP

Except for Customer-owned facilities, all construction, including that for which Customers have made advances and/or contributions, will be owned, operated and maintained by Company.

7.6 MEASUREMENT AND LOCATION

7.6.1 Measurement must be along the proposed route of construction.

7.6.2 Construction is to be on public streets, roadways, highways, or easements acceptable to Company.

7.6.3 The extension must be a branch from, the continuation of, or an addition to, one of Company's existing distribution lines.

7.7 UNUSUAL CIRCUMSTANCES

In unusual circumstances as determined by Company, when the application and provisions of this policy appear impractical, or in case of extension of lines to be operated on voltages other than specified in the applicable rate schedule, or in case Customer's requirements exceed 2,000 kw, Company will make a special study of the conditions to determine the basis on which service may be provided.

7.8 NON-STANDARD CONSTRUCTION

Where extensions of electric facilities require construction that is in any way non-standard, as determined by Company, or if unusual obstructions are encountered, Customer will make a nonrefundable contribution equal to the difference in cost between standard and non-standard construction, in addition to other applicable costs involved.

Company maintains current construction standards and endeavors to keep abreast of all modern methods and techniques of construction.

7.9 ABNORMAL LOADS

Company, at its option, may make extensions to serve certain abnormal loads (such as: transformer-type welders, X-ray machines, wind machines, excess capacity for test purposes and loads of unusual characteristics), provided Customer makes a nonrefundable contribution equal to the total cost of such extension, including transformers.

7.10 RELOCATIONS AND/OR CONVERSIONS

7.10.1 Company will relocate or convert its facilities for Customer's convenience or aesthetics, providing Customer makes a nonrefundable contribution equal to the total cost of relocation or conversion.

7.10.1 When the relocation or conversion is in conjunction with added revenue, as determined by Company and is not for Customers convenience or aesthetics then the relocation or conversion costs plus the costs to serve will be used to determine Customers advance on the basis specified in 2. or 3.

7.11 CHANGE OF MASTER METER TO INDIVIDUAL METER

Company will convert its facilities from master metered system to a permanent individually metered system at Customer's request provided Customer makes a nonrefundable contribution equal to the residual value plus the removal costs less salvage of the master meter facilities to be removed. The new facilities to serve the individual meters will be extended on basis specified in 2. or 3.

7.12 CHANGE IN CUSTOMER'S SERVICE REQUIREMENTS

Company will rebuild or revamp existing facilities to meet Customer's added load or change in service requirements on the the basis specified in 2. or 3.

7.13 DESIGN DEPOSIT

Any applicant requesting Company to prepare detailed plans, specifications, or cost estimates may be required to deposit with Company an amount equal to the estimated cost of preparation. Where the applicant authorizes Company to proceed with construction of the extension, the deposit shall be credited to the cost of construction; otherwise the deposit shall be nonrefundable. Company will prepare without charge, a preliminary sketch and rough estimate of the cost to be paid by Customer for a line extension upon request.

7.14 SETTLEMENT OF DISPUTES

Any dispute between Customer or prospective Customer and Company regarding the interpretation of these "Conditions Governing Extensions of Electric Distribution Lines and Services" may, by either party, be referred to Corporation Commission or a designated representative or employee thereof, for determination.

7.15 INTEREST

All advances made by Customer to Company to aid of construction shall be non-interest bearing.

7.16 EXTENSION AGREEMENTS

All line extensions requiring payment by Customer shall be in writing and signed by both Customer and Company.

RESOLUTION OF THE GU-VO DISTRICT GOVERNING COUNCIL
(Approval of revision and additions to
Gu-Vo Resolution #060795)

Res. No. 070795

WHEREAS, the Gu Vo district Governing Council on July 07, 1995, at a Special Council meeting did upon further review have made revisions and additions on the previously submitted draft statement Gu-Vo Resolution No. 060795, and;

WHEREAS, the Gu-Vo District and Hia-Ced O'odham Program believe that the Spiritual and Cultural relationship to ancestral territories is sacred, and;

WHEREAS, the Gu-Vo District and the Hia-Ced O'odham Program have an inherent spiritual and cultural responsibility to maintain and protect and preserve these ancestral territories, and;

WHEREAS, the Gu-Vo District and the Hia-Ced O'odham Program based this statement on the O'odham beliefs and the voices of the elders who maintain the O'odham traditional culture.

NOW THEREFORE BE IT RESOLVED, that the Gu-Vo District Governing Council endorse and support the revisions and additions to the Gu-Vo Resolution #060795.

BE IT FURTHER RESOLVED, that the Gu-Vo District Governing Council endorse and support this resolution and statement to be submitted to the Organ Pipe Cactus National Monument Draft General Management Plan Development Concept Plan/Environmental Impact Statement.

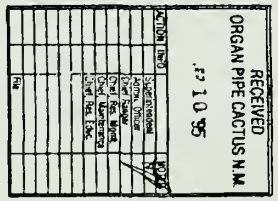
CERTIFICATION

The foregoing Resolution was duly adopted by the Gu-Vo District Governing Council at a meeting held on July 07, 1995 with a quorum of eight (8) council members present with a vote of: 08 FOR; 0 AGAINST; 0 NOT VOTING and 01 ABSENT

Ophelia Rivas, Chairwoman

Fernando Valentine, Supervisor
Hia-Ced O'odham Program

ATTEST:
Priscilla Thomas, Secretary



RECOMMENDATIONS OF THE GU-VO DISTRICT AND HIA-CED O'ODHAM PROGRAM REVIEW GROUP TO THE ORGAN PIPE CACTUS NATIONAL MONUMENTS' CONCEPT GENERAL MANAGEMENT PLAN

July 7, 1995

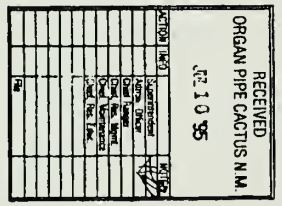
The Gu-Vo District and the Hia-Ced O'odham Program have reviewed the Organ Pipe Cactus National Monuments Concept General Management Plan. Based on our inherent Spiritual and Cultural responsibility to our Ancestral Territories this requires the O'odham to be placed on a decision making level of the Monuments Management and Administration.

The O'odham presence in the Sonoran Desert region has been since time immemorial. The O'odham Spirituality and Cultural relationship to the aboriginal territories is based on the belief that the whole ecosystem is Sacred. Through this belief the O'odham have engaged in traditional survival practices in this region while maintaining an environmental balance and preservation of the area.

The O'odham appreciate the opportunity to make recommendation to the Organ Pipe Cactus National Monument's General Management Plan. Development Concept Plans and Environmental Impact Statement. The O'odham have established a good relationship with the monument due in large part to the efforts of the present Superintendent. The O'odham wish to ensure that this relationship is maintained and strengthened with future monument personnel. The development of a Memorandum of Understanding as proposed in the General Management Plan is a positive mechanism to insure O'odham participation in all levels of the Monuments management.

An Intergovernmental Agreement with the Tohono O'odham Nation is an alternative proposal the Organ Pipe Cactus National Monument may consider that will be more beneficial to the O'odham interests.

The Alternative Proposals in the General Management Plan have raised a number of issues that are of concern to the O'odham. The following proposals are presented with the intention that they be incorporated as an Appendix of the Final General Management Plan for the Organ Pipe Cactus National Monument. Some of the recommendations are based on the principles of the United Nations Man and the Biosphere Program which was designed to include the participation of people indigenous to the area.



Development Plans: Quitobaquito Management Area

Objections to Alternative 1 on the following grounds:

1. We do not want to draw attention to the Salt Trail which is sacred.

2. We do not want the Salt Trail used as access to the Quitobaquito Basin.

3. We object to the possibility that the Salt Trail would require alteration--grading, smoothing, paving to provide access for all visitors. This objections is based on the sacred nature of the trail and the fact that a portion of the trail is a recorded archeological site.

4. The Salt Trail passes through a number of archeological sites. Use of the O'odham Salt Trail by visitors would increase access to sites that are already fragile. Routing visitors through these sites would result in damage.

5. The O'odham were not consulted regarding the Quitobaquito Management Plan. Planners decided what to do without taking into consideration O'odham ideas about a place that is sacred to us. One or two meetings over the years does not constitute consultation.

Objections to Alternative 2 on the following grounds:

1. Parking lot is within an archeological site and an area that was used historically by the O'odham.

2. Toilet facilities are within an archeological site and an area that was used historically by the O'odham.

Alternative 3, Minimal development of the area while providing access, is being proposed as the best action for Quitobaquito. Minimal development is desired to prevent unnecessary damage to the natural, historic and riparian habitat:

1. Remove present parking lot and establish a new parking lot in a mutually agreed upon with O'odham on a location outside the Quitobaquito basin.

2. Use a portion of the existing road as the visitor trail into the Quitobaquito area.

3. Restoration/re-vegetation of disturbed areas (including that portion of the present road not used as a trail) to a natural state.

4. An Archeological survey is required of the entire Quitobaquito area to identify O'odham archeological sites. The Quitobaquito culture area is a much larger area--include fields, houses, archeological sites in Mexico and other archeological sites and villages on the US side.

5. The General Management Plan of the Organ Pipe Cactus National Monument include provisions in the Plan to require conservation of O'odham Sacred Sites and Cultural Areas.

6. The General Management Plan of the Organ Pipe Cactus National Monument include provisions in the Plan to require O'odham input into interpretation of the area.

7. We object to any new border entrances in the Quitobaquito area.

8. Increased protection and patrol of the Quitobaquito area. This could be best accomplished by an O'odham Ranger who understands the area. The O'odham Ranger could protect as well as interpret.

9. Creation of new agreements and Enforcement of existing International Agreements to Protect and Conserve Air Quality and Water Quantity/Quality.

10. O'odham input into any development plan regarding Quitobaquito.

11. O'odham strongly recommend restrictions of future developments on new and existing Trails

Quitobaquito National Register

The O'odham object to the Quitobaquito National Register Nomination. The objections include:

1. Concern that the O'odham would have to reveal more of their history that we do not want made public.

2. O'odham concerns and ideas were not taken into consideration.

3. Incorrect published information regarding the O'odham was used in the nomination.

4. We are concerned that National Register status will attract more visitors thereby causing more damage to the fragile environment.

Natural and Cultural Resources:
Quitobaquito area

O'odham Concerns about the Quitobaquito area include:

1. Loss of medicinal plants.

2. The ditch from the spring does not allow for flooding of adjacent areas that contain medicinal plants. Problem must be corrected.

3. Decreasing of wildlife in the Quitobaquito area.

4. Is not adequately identified and recognized as O'odham aboriginal territories.

5. The sacredness and importance of the natural spring water to the O'odham must be acknowledged.

6. The dropping water table in the Sonoyta Basin is affecting the springs.

7. Restriction to the Quitobaquito area during traditional ceremonies must be enforced.

Action: The following actions will be conducted and controlled with respect to the Intellectual Cultural Property Rights of Indigenous Peoples as enforced through actions of the United Nations and U.S. Laws.

1. Organize a joint O'odham--ORPI Natural/Cultural Resource Project to conduct an ethnobotany study of the area with specific reference to medicinal plants and wildlife. O'odham people would identify and name plants and animals, the monument would document the number and location of the plants, animals and monitor the plants over time.

2. Organize a joint O'odham--ORPI Natural/Cultural Resource Project to survey the area to begin restoration of the natural water flow from the spring to the pond. Survey at various times of the year to document where important plants are located, and to insure that plants are getting sufficient water.

3. Include O'odham perspective of the cultural history of the area.

National Register:

There is a need for increased consultation regarding National Register Nominations of Traditional Cultural Properties. Present O'odham views and concerns have not been taken into account in the National Register Nomination in the Monument area.

Additionally, incorrect published information was used and referenced in nominations. This information needs to be corrected.

Finally, there is a concern regarding access to information provided by the O'odham. Who has access to information contained in National register Nominations and various professional reports, such as the Quitobaquito Cemetery Report.

Actions:

1. The O'odham request that any future National Register nomination of historic and prehistoric sites be put on hold until an O'odham Commission is established.

Highway 85

We oppose any possible re-routing of commercial traffic through the reservation via the Gu Vo District.

Law Enforcement Issues:

The O'odham have a number of concerns regarding the drug trafficking looting, vandalism, and pothunting at archeological sites and historic villages in the monument and the reservation.

Action:

1. Increased Back Country Patrol by ORPI Rangers.

2. ORPI Rangers, Tohono O'odham Police and U.S. Customs should take the lead in developing solutions to the law enforcement issues.

Interpretation:

There is a need for greater involvement of O'odham in the Interpretative Division. The Sonoran Desert is the homeland of the O'odham--who better to explain the connection and importance of the water, land, plants, animals, and people. The O'odham believe the whole system is important: the entire Sonoran Desert is Sacred. Recognize aboriginal territories and stress that the O'odham are the desert people--the O'odham have survived and lived in harmony with the desert since the beginning.

Action:

1. Establishment of a position on the Interpretative Staff for an O'odham.

2. Continuation of O'odham Day.

3. Incorporate O'odham terms for places, plants, animals, etc., in interpretative programs, including exhibits.

4. Establish a way for O'odham to sell Arts and Crafts in the Visitors Center.

Land Exchange:

The Gu Vo District objects to any proposed land exchange.

Culture History

The view of culture history presented in the GMP is that of Anthropologists and Archaeologists. The view of culture history by the O'odham and archeologist is not compatible.

Action:

1. Include a section in the Culture, History that reflects the O'odham view of Culture History.

2. Clearly delineate that the archeological view of culture history is based on the study of artifacts and uses archeological terms and nomenclature.
"This section represents the findings of archeologist and the nomenclature they use. But the O'odham believe they have been here since time immemorial."

Cultural Resources

O'odham Concerns:

1. No O'odham involvement.

2. No O'odham archaeologist.

3. No mechanism for O'odham consultation.

4. No mechanism to provide access to Organ Pipe Archives.

5. Limited access to specific sites to continue our spiritual obligations.

6. Designation of specific land use areas disregarding traditional O'odham values.

Actions:

1. Increased O'odham involvement

2. Hire park archeologist to work with O'odham.

3. Increase archeological site protection including O'odham consultants.

4. Identify historical documents and archival material relating to O'odham.

5. Provide a mechanism where O'odham Traditional Leaders can rejuvenate O'odham ceremonial traditions in the Monument and include provisions in the Plan to grant unlimited access and unrestricted use of their Sacred Sites.

6. Stress traditional land use and values: Water, Land and Culture cannot be separated, the whole ecosystem is sacred.

Other Concerns, Issues and Recommendations:

- Establish an O'odham Commission with voting powers to direct management decisions under the Memorandum of Understanding/Intergovernmental Agreement, to represent the Tohono and Hia-Ced O'odham interests.

- The General Management Plan of the Organ Pipe Cactus National Monument include provisions in the Plan to require preservation of O'odham Sacred Sites and Cultural Areas.

- Develop a process to immediately notify and consult O'odham representation under Native American Graves Protection & Repatriation Act (NAGPRA), upon discovery of O'odham Ancestral (Human) Remains, Properties, and Artifacts exposed by nature or other means.

- The General Management Plan should incorporate the whole Monument area as a cultural and traditional use area of the Tohono and Hia-Ced O'odham, and recognize their aboriginal territories.

- To Restrict and Control delicate information concerning sacred sites, objects and cultural related artifacts to the public unless approved by the Tohono and Hia-Ced O'odham.

- Provide a mechanism to re-establish O'odham communities under the Man And the Biosphere principles.

- Develop prevention programs to increase site protection and prevent desecration or un-repairable damage to delicate O'odham archeology.

- Establishment of an O'odham Commission that would work with monument staff on issues regarding cultural and natural resources.

- Clarification of existing laws protecting archeological resources under the National Monument status.

- The nature and disposition (access) of various kinds of reports and files. This could include archeological reports (these reports are not available to the public-restricted access to NPS personnel), interviews, notes of meetings, videotape, and records of NAGPRA consultation.

Actions:

- Provide tapes and correspondence of meetings between Larry van Horn and various individuals and districts. Correspondence should cover both the GMP and National Register Issues.

- Clarify Organ Pipe position on International Agreements.

- Explore funding through the Mexican Affairs Office for joint Park status.

- Support the development and funding of an Indian Affairs Office in the National Park Service.

TOHONO O'ODHAM NATION

P.O. Box 837 • Telephone (602) 383-2221

Sells, Arizona 85634

COMMENTS ON THE ORGAN PIPE CACTUS NATIONAL MONUMENT GENERAL MANAGEMENT PLAN, GENERAL CONCEPT PLANS AND ENVIRONMENTAL IMPACT STATEMENT BY THE CULTURAL PRESERVATION COMMITTEE OF THE TOHONO O'ODHAM LEGISLATIVE COUNCIL

THE NEED FOR DIRECT CONSULTATION WITH THE TOHONO O'ODHAM NATION

The Tohono O'odham (formerly referred to as Papagos) have a special relationship with Organ Pipe National Monument (ORPI) which dates back to the legislation creating the Monument in 1937. That legislation indicated that, 'the administration of the monument shall be subject to: (1) Right of the Indians of the Papago Reservation to pick the fruits of the organ pipe cactus and other cacti, under such regulations as may be prescribed by the Secretary of the Interior;...' 50 Stat. 827 However, the need to improve the relationship between ORPI and the Tohono O'odham Nation (TON) is apparent throughout the presentation of these draft development plans. The need for direct consultation between the TON and ORPI has been established by federal legislation dealing with the protection of cultural and archaeological resources.(p. 127) Nonetheless, this draft management plan has been developed with a minimum amount of direct consultation with the TON and the districts of the Nation directly impacted by the plans. Although there are a number of references to Native American consultation throughout the plan, it lists only eleven meetings over the six years of planning that has gone into the development of this plan. (p. 128) Those eleven meetings include separate meetings held with officials of the TON, with officials of the Gu Vo and Hickiwan districts of the TON, ethnographic interviews with individuals, and site visits made to the park and selected communities of the TON. (Id) However, no O'odham are listed as part of the Planning Team or as Contributors to the plan. (p. 130) The plan states that, 'Additionally, American Indian consultation continues to take place through ISDA,...' (p. 128) A call for comments on the completed draft plans and working with some regional organization which includes O'odham representatives is not the same as direct consultation during the development of the plans. It is agreed that a Memorandum of Understanding needs to be developed between the TON and ORPI in order to enhance the existing relationship and to bring it in line with the requirements of federal law. (see pp. vi,24,117) ORPI's involvement with ISDA should not be confused

with, nor is it a substitute for the separate need for direct consultation with the TON. Therefore, the TON suggests that the need for ongoing direct consultations between ORPI and the TON be listed in the "DESIRED FUTURES" on page 12 under the Cultural Resources section because this is what sets the "framework" for management strategies contained in the plan. It is also suggested that any MOU include the framework for these ongoing direct consultations and that ORPI recognize that consultations on an "as needed" basis is not sufficient legally or practically. There should be O'odham representatives on the Planning Team of any and all Management Plans which might affect O'odham rights and practices within ORPI. It should be understood that it is always "appropriate" to consult with the TON regarding impacts to cultural resources.(see pp. 118, 120) This need for direct consultations permeates most of the other comments on this management plan as well.

NEED TO DEVELOP A MUTUALLY ACCEPTABLE CULTURAL RESOURCE MANAGEMENT STRATEGY

The consultation need is apparent in the development of the Natural and Cultural Resource Management Plan (NCRMP) completed in 1994 by "the park staff and other professionals" since that will "guide management of the park's natural and cultural resources." (p. 23) Although ORPI did recieve comments from the O'odham in the consultations that did occur during the development of the mangement plan and there is some lip service to those comments (see pp. 10, 20, 106, 128); they are not actually incorporated into the underlying stategy of cultural resource management as presented in this management plan or it is assumed in the NCRMP (a copy of the NCRMP is not in our possession for review at this time). In other words, the cultural resource management strategies that are presented in this management plan and in the development alternatives all reflect the anthropological and archaeological perspective and some minimum compliance with the laws relating to cultural and archaeological resources; but they do not incorporate an O'odham perspective into the management stategy. For example, the O'odham concerns about the confidentiality of some of the information is recognized (p. 10) but the overall mangement strategy is to "emphasize the preservation, protection, and interpretation of" the cultural resources. (p. 20) "The NCRMP calls for many actions that would increase significantly the park's knowledge and understanding of known and currently unknown cultural resources and properties." (p. 24) An interpretive prospectus (IP) was developed during the planning effort and it is summarized on pp. 27-28. The plan goes on to indicate that,"in recognition of the park's expanded interpretive role as a Biosphere Reserve, the park staff and planning team developed" a "theme outline for interpretation at the park"; but all this was done without direct consultation with the O'odham. (see p. 28) Indeed, the plan indicates that, "Preservation of significant resources, including places sacred to the Tohono O'odham Nation, would be enhanced by increasing research and stabilization efforts and implementing more interpretation." (p. 117) The O'odham perspective and concerns about confidentiality of certain information and the intellectual property rights of the O'odham to certain information must be incorporated into any and all planning and management decisions on cultural resources. How can the TON have confidence in ORPI to adequately manage and interpret cultural properties under their jurisdiction if they are not a part of the management team and when they are consulted their comments are not incorporated into the decision making process? Confidence in the process is also eroded when misinformation about the TON is presented by the park staff in public documents such as this management plan? (see p. 88 indicating that "The basic political document of the Papago (O'odham) is the constitution and bylaws ratified by tribal members on 12 December 1936, and approved by the Secretary of the Interior on 6 January 1937"(Dutton 1984)." when actually the TON is currently operating under a constitution adopted in 1986 and which supercedes the Constitution of 1936.)
The proposed MOU should include a framework for O'odham participation in the development and implementation of all cultural resource planning and management under the jurisdiction of ORPI. The TON thinks that it can work with ORPI and the improvement of relations over the last several years is encouraging, but the role of commentator to pre-existing plans and decisions is insufficient and inappropriate considering the importance of the decisions and plans being made.

NEED TO CHANGE THE DEVELOPMENT PLAN RELATING TO QUITOBAQUITO SPRINGS

Neither of the development alternatives as currently presented for Quitobaquito Springs is acceptable to the TON. The preferred future of Alternative 1 calls for a .7 mile walking trail which, "would lead over a low saddle following the approximate route of the historic Old Salt Trail" (p. 36) The plan goes on to indicated in the Environmental Consequences section that, "Increased visitor use along portions of the historic salt trail may contribute to erosion and possible sheetwash, which could impact archaeological resources that may be buried in these areas."(p.118) The plan goes on to say that, "consultation with the O'odham would occur during the design stage so that their interests and concerns can be incorporated into the new design and visitor use patterns at Quitobaquito. An archaeologist would also work closely with designers and the O'odham to insure that impact to the cultural resources in the area are avoided or minimized" (Id.) Of course if the O'odham had been a part of the planning and original design to begin with then it would have been obvious that this is an unacceptable plan. Since ORPI obviously recognizes the importance of Quitobsquito to the O'odham and it has recognized that it is eligible for inclusion on the National Register of Historic Places (p. 84) and therefore is most probably capable of being designated a Traditional Cultural Property; it is unclear to the O'odham how either of the alternatives proposed can comply with the intent behind the federal laws affecting cultural and archaeological resources. Rather it seems that ORPI is intentionally trying to limit the area to be included in the protected zone and trying to

place it on the National Register so that information about tha area would be accessable to the public. That is, the plan acknowledgas that there are over 16 sites in tha Quitobaquito Basin (p.83) and that the area has been occupied since Paleoindian times (p. 80) and that it has continued ethnographic significanca for the O'odham (p. 88) and yet they try to draw limited boundaries around the sites which deserve protection instead of incorporating tha broader landscape perspective of Traditional Cultural Property (TCP) designation. Designation of the area as a TCP would also help wiith the confidentiality of information concerns that the O'odham may have regarding the araa and would help to limit access to certain information about the area under provisions of Section 304 of the 1992 Amendments to the National Historic Preservation Act (106 Stat. 4765). However, any and all planning regarding the proper designation and development of the area must be done in direct consultation with the O'odham in order to adequately protect and preserve this area.

NEED TO CLARIFY THE AMBUGUITY REGARDING STATE ROUTE 85

In the introduction it is indicated that NPS considered the re-routing of traffic from State Route 85 to Route 34 through the Tohono O'odham Reservation but that due to "its controversy, oensitivity, and the recent enactment of NAFTA, the NPS decided instead that a saparata planning effort should occur" and that although NPS etill felt it was in the best interests of the visitors and resourcas of ORPI to re-route commercial and other through traffio it "rejected proposing a solution to this issue in thie general management plan." (p.18) And yet, in discussing the area transportation network under the preferred proposal it indicates that, "NPS would initiate a cooperative planning effort to find solutions that would help make this roadway more compatible with wilderness values, sensitive to resources, and safer for visitors and residents. Planning would be facilitated by the NPS and would be done with the cooperation of all international, fedoral, state, Tohono O'odham, and local agencies involved, as well as the general public." (p.31) How can the O'odham have confidence in the "cooperative planning effort" given the lack of true cooperation and consultation that went into the development of thie general management plan? The plan then goes on to state that, "If a solution for through traffic can be determined through this planning effort, the portion of State Route 85 in the park would be redesignated as a park road.... Entrance stations could then be developed at tho north and south boundaries of the park. The existing entrance fee could be collected at these stations instead of at tha booth located near the visitor center."(Id.) Thus the road would become a toll road and even though ORPI has waived entrance faes to the park for O'odham it would insure a high volume of traffic over the alternative route which almost certainly would have to be located on TON lands. Given the objections currently being raised by residents of Gu Vo to routing traffic through their district it seems that thie kind of thinking should be stopped now before it is too far along for tha O'odham to have any meaniful input.

CONCLUSION

While the TON appreciates the opportunity to comment on this management plan it thinks that consultation with the Nation has been too little too late. The Nation should have been ineluded as part of tha planning team or at the very least as part of the contributors to the management plan in order to adequately preeent its perspective in all phases of the process and in all areas under consideration. Without that initial and continuing input the Nation can not adequately comment on all the potential impacts of this plan in the time period allowed. Therefore tho Nation would request an extension of the time available to render comments so that it can study tha document and all of the affiliated documents that need to be factored into meaniful comments on the management plan in order to adequately present all of its concerns. At tha very least a MOU needs to be developed immediately to establish a framework for meaniful cooperation and consultation in the future.

Respectfully Submitted
Joseph Joaquin
Cultural Preservation Committee

HICKIWAN DISTRICT COUNCIL
Rte. 3, Box 873
Ajo, Arizona 85321
Telephone (602) 387-2683

Statement of the Hickiwan District Council concerning the Organ Pipe Draft Management Plan, at a Special meeting held on June 09, 1995.

1. Hickiwan District is requesting for a three (3) month extension commencing on July 10, 1995.

2. Any new development should be done in consultation of the Tohono O'Odham Nation, new developments may have a great impact on archaeological sites that are known only by the O'Odham people and that prior archaeological surveys may be inaccurate.

3. We feel that the Salt Trail is very sacred and that this be restricted to the Non-O'Odham as well as the oral History and interpretation to the Non-O'Odham due to the belief of the O'Odham people.

4. As mentioned, the Salt Trail and other Sacred sites should be restricted as well as information about these sites and no new developments should occur such as new trails to these areas.

5. O'Odham access to the Organ Pipe National Monument should be as it used to be, open to the O'Odham people with a No Fee payment as well as the right to ceremonial activities, use of traditional plants etc. with the understanding that non-Indians should not participate and that the Presidential Proclamation No. 2232 April 13, 1937 (50 stat. 1827) and other executive orders and or Proclamations should be enforced that provides for open access to the O'Odham People, unless these have been amended, we feel the O'Odham have the right to know of these changes and any others that may occur.

6. Hickiwan District also feels that their should be Employment Opportunities for the O'Odham people within the Organ Pipe National Monument such as training of O'Odham Park Rangers Archaeological Trainers (O'Odham) and O'Odham guides to help in the Visitor Center, we would also like to see a summer youth employment activity take Place so that the O'Odham youth would be educated about the Organ Pipe National Monument. We also feel that if the O'Odham had job opportunities in the Park, this would help with communication among the Park and the Tohono O'Odham Nation as well as having O'Odham interpreters on staff.

7. The Hickiwan District also stress the importance of having O'Odham people serve on the management Board of the Organ Pipe National Monument and on the Board that is working to implement the proposed Management Plan. We feel that as a soverign Government that any agreement that is to be entered into, would be such that gives the Tohono

   O'Odham Nation the same authorities to question any changes of the Proposed Management Plan as well as changes within the Organ Pipe National Monument, this, we feel is what Government to Government relationships are all about.

8. The land exchange issue should be taken out, we disagree with this, We as O'Odham People have always felt that this is our ancestral land and that we have rights to this land the O'Odham People call home.

9. Burial sites should be restricted and protected and also new development on such sites not yet identified would be addressed under NAGPRA Act of 1990.

With this the Hickiwan District of the Tohono O'Odham Nation would like to add that we the O'Odham People have always been caretakers of Mother Earth which has given us life that all things are sacred and need to be protected, that is why we the O'Odham People need to be aware of all changes that the Non-O'Odham are doing to our Homelands which all O'Odham people hold so sacred, we must continue to be concerned about protecting the lands of the O'Odham.

Respectfully Submitted By
Manuel Oseguera, Jr.
Hickiwan District Chairperson

PIMA ASSOCIATION OF GOVERNMENTS
177 N. CHURCH AVENUE
SUITE 403
TUCSON, ARIZONA 85701
(520) 792-1093
FAX (520) 620-6981

June 30, 1995

Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, AZ 85321

Dear Superintendent:

On behalf of Pima Association of Governments' Water Quality Planning Section, I have reviewed the draft General Management Plan for Organ Pipe Cactus National Monument. I support *Alternative 1, The Preferred Alternative,* because it emphasizes increased regional and interagency coordination, protection of the park's unique desert ecosystem, and protection of the aquatic environment at Quitobaquito.

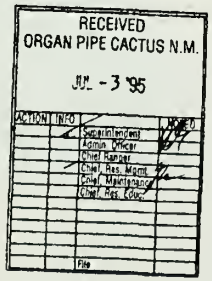
Also, redesignation of the monument as the Sonoran Desert National Park is appropriate, as the area represents one of the finest examples of the Sonoran Desert in North America. Also, redesignation as a National Park will probably promote increased tourism in the area and help local economies.

I also think the plan describes a good balance between providing visitor facilities and preserving the wilderness values of the park. This balance is often hard to find, when the number of people visiting National Parklands is rapidly increasing nationwide, and when these visitors often have conflicting demands.

The Park Service is to be commended for its efforts to define a management plan for this park, which is an important recreational and educational resource for Pima County and the rest of the nation.

Sincerely,

Greg Hess
Hydrologist



23 Oct 95

56 OSS/OSTA
14558 W Spad St
Luke AFB AZ 85309-1878

Mr. Harold Smith, Superintendent
Organ Pipe Cactus National Monument
Route 1 Box 100
Ajo AZ 85321

Dear Harold

Mr. Terry Hansen, Assistant Airspace Manager, Luke AFB will represent the 56FW at the Public Meeting scheduled for 25 Oct 95 in Ajo. I have the following comments concerning the OPCNM Draft Management Plan/Environmental Impact Statement:

- Page 11, Visitor Use and Interpretation: The statement that low level flights over OPCMN have increased in recent years is erroneous. Working with the 355FW, Davis-Monthan AFB we have increased the minimum altitude of flight over the headquarters and trail areas. In addition, the 355FW has taken measures to significantly reduce the number of low level training flights flown over OPCNM . Military Training Routes VR-260 and VR-263 transit the northeast corner of OPCNM, down to 500' above ground level for a distance of 10 nautical miles. Traveling at 420 NM per hour and with a maximum utilization rate of 500 flights per year this equates to transiting the OPCNM a total of 12.5 hours per year. Average utilization per flying day/per year is approximately 1.6 times per day. Our efforts to move these two MTRs off of OPCNM have encountered resistance from the Tohono O'Odham Nation.

- Page 97, Surrounding Land Uses: The statement that airspace above the Cabeza Prieta National Wildlife Refuge is used to practice aerial gunnery on towed targets is misleading. The primary utilization of the airspace above the CPNWR is to train in Aerial Combat Tactics down to a minimal level of 1500' above ground and does not entail any weapons delivery. The air to air portion of the Goldwater Range which lies over the CPNWR , in accordance with our Letter of Agreement, must be coordinated and scheduled 90 days in advance. It was not scheduled in FY 1995 and we do not anticipate utilizing it in the near future.

Harold, if you have any question please give me a call at 602 856-5855.

Sincerely,

GARY R. BLAKE, Civ
Chief, Airspace Management

United States Department of the Interior
BUREAU OF INDIAN AFFAIRS
PAPAGO INDIAN AGENCY
SELLS, ARIZONA 85634

IN REPLY REFER TO

Environmental Quality

Mr. Harold J. Smith, Superintendent
Organ Pipe Cactus Netional Monument
Route 1, Box 100
Ajo, Arizona 85321

Mr. Smith:

The Bureau of Indian Affeirs Papago Agency has had the opportunity to review the Draft General Manegement Plan/Development Concept Plans/Environmentel Impact Statement for the Organ Pipe National Monument. Based on a cursory review, we provide the following comments:

1. Page 10. Cultural Resources and Relationships If it is the intent of the Park Service to interpret all information sacred to the surrounding Nations for public use, we recommend that the Tohono O'odham Nation be a cooperating agency in the formuletion of the EIS. This may also aid in handling the disposition of artifects.

2. Page 118. Archaeological Resources In administering archaeological surveys, mitigetion or monitoring, the neighboring Indian groups should be contacted and informed of the discoveries each time a discovery situation occurs, not when appropriate as stated.

3. The Papago Agency supports the Park's proposal to limit access roads within the Monument, this will elso apply to eny proposed access roeds leading onto the Tohono O'odham lands. Limited access roeds will aid in alleviating illegal dumping of solid waste and uneuthorized campers.

4. If the improvement will require land exchanges with the Tohono O'odham Nation, site surveys should be conducted for possible hazardous weste areas or ineppropriate developments from previous lend uses.

Thank you for providing us the opportunity to comment on the document. If you have any questions, please contact Minnie Mann of our Agency at (520)383-3341.

Sincerely,

Superintendent

cc: Environmental Quality Services
Phoenix Area Office

Planning Department
Tohono O'odham Nation

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Arizona State Office
3707 N. 7th Street
P.O. Box 16563
Phoenix, Arizona 85011

IN REPLY REFER TO
1793 (932)

Memorandum

To: Superintendent, National Park Service, Organ Pipe Cactus National Monument, Ajo, Arizona

From: Deputy State Director, Resource Planning, Use and Protection

Subject: Comments to the Draft General Management Plan/Environmental Impact Statement

Attached are our comments to the Draft General Management Plan/Environmental Impact Statement.

In addition, please correct your mailing list as follows: Herman L. Kast using the same address as above.

Herman L. Kast

Attachment

RECEIVED
ORGAN PIPE CACTUS N.M.
JUL 13 '95

ACTION	INFO		INITIAL
		Superintendent	
		Admin. Officer	
		Chief Ranger	
		Chief Res. Mgmt.	
		Chief Maintenance	
		Chief Res. Educ.	
		File	

Comments from the Lower Gila Resource Area on Organ Pipe Cactus National Monument's Draft General Management and Development Plans

Pg v, par 1, sen 4 Should the word be "descendants" of the Tohono O'odham, rather than ancestors?

Pg 12, left col, par 4 (starts with "Recent...") Should be "NAFTA has set in motion..."; In the fourth sentence "resource depletion" is mentioned twice.

Pg 23, left col, par 2, Add "of the National Historic Preservation Act" after "section 106."

Pg 23, section on Science and Resource Center Will the science center be aligned with any other agencies or universities? Will fees be charged to the researchers?

Pg 24, left col, par 2 Starting here and throughout the document, the term "American Indian" is used. It is our understanding that "Native American" is the accurate and much more culturally sensitive term to use. We suggest using this term throughout the document, unless the Tohono O'odham or Hia Ced O'odham prefer the other.

Pg 24, right col, par 4 Here "American Indian" and "Native American" are used in the first sentence. If there is a distinction being made here between the Native Americans north of the Mexican border and south of it, we suggest that an explanation be provided. It is confusing as it is being presented in the plan, since both terms are being used throughout the text. It appears inconsistent. Also in the first sentence, add "National" in front of "Historic Preservation Act".

Pg 25, table 1, second section Insert "Eligible" after "Register".

Pg 29, right col, par 4 Is "exhibitry" a jargon word?

Pg 31, left col, par 4 The correct title is "The National Environmental Policy Act" and it should be before the acronym NEPA.

Pg 34, section on Cooperative Management This plan proposes to reach outside of the monument's boundary and to start a cooperative process of defining regional goals. However there is just one brief mention of other Federal agencies' mandates and agendas which is under "Surrounding Land Uses" on page 97. For the regional approach to really be taken seriously in this plan (it is a worthy effort), more emphasis should be placed on regional understandings and working within the mandates and constraints of all of the regional participants. For a true regional approach that has a chance of lasting over the long term, the plan must consider the needs and concerns of the region's population.

Pg 36, left col, par 3 The trail relocation is a good idea which will help the springs, riparian situation and animals.

Pg 74, left col, par 4 and 5 What are the goals of the recovery plans for the pronghorn and the lesser long-nosed bat, and how do the proposals fit into the goals?

Pg 77, right col, par 2 *Quercus ajoensis* is referred to instead of *Quercus turbinella*. Also the new treatment of junipers for the *Vascular Plants of Arizona* identifies the junipers in southwestern Arizona as *Juniperus coahuilensis*, not *Juniperus monosperma* (Bartel 1994).

Pg 78, section on Non-native Vegetation This section refers to several invasive species, but does not include *Brassica tournefortii*, a species which is invasive on adjacent public land and the Cabeza Prieta National Wildlife Refuge (Phillips 1994). The first documented record of *Brassica tournefortii* for Organ Pipe National Monument is in the *Flora of Organ Pipe National Monument* by Bowers (1980). Bowers states that *Brassica tournefortii* is ". . . widespread in the monument. . . . The species is an Old World weed which is rapidly spreading along roadsides in the Southwest. There is a possibility that it will crowd more colorful native species out of the roadside habitat." The increased density of this weed also adds to a self-perpetuating fire cycle that results in the elimination of native Sonoran Desert woody species such as saguaro and palo verde, and the conversion of Sonoran Desert to an annual grassland.

Pg 83, left col, par 3 There are no bibliographic references included for the archaeological surveys performed by WACC, although the reports by Rankin are listed in the back.

Pgs 83-86, section on History and Historic Resources This is fascinating and full of good information, but there are very few references included. It seems clear that in places these references have been omitted.

Pg 88, left col, par 2 Mention that the traditional territory of the Hia Ced O'odham include the BLM-administered lands to the north around Ajo.

Pg 90, section on Visitor Profile Recreational use is the dominate public use of the Monument but is only superficially dealt with. There is mention on page 19 that "Most of these current capacities would be retained since visitor use does not currently exceed these limits". What are these limits? How, when and where were they established?

At several points in the plan there is reference to increasing visitor use, which appears to be quantified only in appendix F. The low projection in appendix F indicates an increase of approximately 60,000 visitors by the year 2002, an increase of 20 percent over the next six years. While this increase may be within the current capacity it is a significant increase that should be stated more clearly in the text and analyzed in the environmental consequences section.

In addition it is easy to tell from table 5 that over 50 percent of the monument's use occurs during the four months between January and April. Estimates from 1992 show an average of 31,250 visitors per month during this four month peak use period. Peak period use will increase by an average of 7500 visitors a month to 38,750 a month by 2002. During this peak use period the park amenities and destinations are unavailable or extremely crowded. Some of the proposals in this plan (such as the new visitors center) would help. The increase of visitor use should be addressed in detail and analyzed in the environmental consequences section.

In the new treatment of oaks for the *Vascular Plants of Arizona*, Landrum (1994) has combined *Quercus ajoensis* with *Quercus turbinella*, the common scrub oak species. *Quercus ajoensis* would then no longer be a rare and sensitive plant. Also, there are scattered occurrences of organ pipe cactus (*Stenocereus thurberi*) in the Sand Tank Mountains at their furthest northern range limit (pers obs.).

Literature Cited

Bartel, J. A. 1994. Cupressaceae. Journal of the Arizona-Nevada Academy of Science 27:195-200.

Bowers, J. E. 1980. Flora of Organ Pipe Cactus National Monument. Journal of the Arizona-Nevada Academy of Science 15:33.

Landrum, L. R. 1994. Fagaceae. Journal of the Arizona-Nevada Academy of Science 27:203-214.

Phillips, A. M. 1994. Invasion of *Brassica tournefortii* (mustard) in the Pinta Sands area. Memorandum to Refuge Manager, Cabeza Prieta National Wildlife Refuge, 20 April 1994. 4 p.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

July 10, 1995

Stanley T. Albright
Regional Director
Western Regional Office
National Park Service
600 Harrison St., Suite 600
San Francisco, CA 94107-1375

Dear Mr. Albright:

The Environmental Protection Agency (EPA) has reviewed the **Draft General Management Plan Development Concept Plans Environmental Impact Statement** (DEIS) for the **Organ Pipe Cactus National Monument**, Arizona. We are submitting the following comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations implementing NEPA (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The National Park Service (NPS) examined two alternatives, a "no action" or "continuation of existing conditions, and a "Build" alternative, which is the preferred alternative. The stated purpose for the General Management Plan is to guide the overall management and use in ways that will best serve visitors and preserve the values of the monument. The alternatives address management policies for natural, historic, and cultural resources, plans for visitor use facilities, interpretive sites, exhibits, trail development and Monument operations. Both alternatives would entail upgrading the existing trail systems and the creation of new trails. The preferred alternative discusses a program of expanded natural and cultural resource protection, and visitor uses and information regarding the Monument. The DEIS also mentions a plan to return several developed areas to a wilderness state.

In many respects the actions being proposed are relatively specific, while the impact assessments for the General Management Plan are stated generally. Site specific implementation measures are not consistently identified in the Plan (trail realignments and developments, facilities designs and locations, and the like) and will, in many cases, depend upon subsequent planning. The maps provided do indicate where facilities will most likely be located in the areas of development, however, there are no maps provided for the proposed 30 miles of maintained trails in the Quitobaquito area. The DEIS does not mention whether or not

specific design and management issues which are not covered in this document will be addressed in future detailed plans and studies. EPA suggests that a more detailed analysis of specific impacts on the biological resources, air quality, water, and other aspects of the environment is necessary on a project by project basis.

We also believe that more detailed information should be included in the Final EIS, such as specific mitigation measures, and guidelines and procedures regarding erosion control, drinking water, air quality, threatened and endangered species, trail management, and land use inside and outside the Monument. This information could then be utilized as a baseline reference for subsequent NEPA documents. Having this framework in the Final EIS will help other planning agencies, such as the county and tribal council understand the basis for later NEPA documents and will help identify what should be addressed in any future cooperative agreements between agencies.

We are extremely concerned that the DEIS analyzed only two alternatives. The document did not present alternatives that differed enough in scope to sharply define the comparative environmental impacts, making it difficult to choose among the options proposed. This is clearly not the intent of NEPA. Presenting a range of alternatives is "the heart of the environmental impact statement" (40 C.F.R.1502.14). This section states that agencies shall rigorously explore and objectively evaluate ALL reasonable alternatives. We believe that there are additional alternatives that the NPS could have analyzed in the document based upon the stated purpose and need. For example, we suggest the FEIS include an alternative which controls restricted use of the monument, particularly in sensitive ecological areas. Another suggestion is to use a matrix approach to the plan evaluating alternatives for each component of the plan (visitor use, natural resource protection, facilities development) and identifying the preferred action that offers the least environmental impact. Please refer to our detailed comments for further discussion of this issue.

Due to the lack of an analysis of a full range of alternatives and the fact that there is very little discussion of mitigation measures which would be used to minimize the impacts identified in the DEIS, we have rated this DEIS EO-2 (Environmental Objections--Insuffioient Information; see attached rating sheet). Our detailed comments, which are attached, suggest expanding the discussion of several areas of concern, and we've also identified a number topics for clarification in the Final EIS. We will contact you in order to discuss these concerns further.

We appreciate the opportunity to review your DEIS. Please send one copy of the Final EIS to this office when the document is officially submitted to EPA Headquarters. If you have any questions, please call me at 415-744-1566, or contact David J. Carlson at 415-744-1577.

Yours truly,

Deanna Weiman, Director
Office of External Affairs

Attachments (3)
#000069 orgnpgmp.dei

cc: Superintendent, Organ Pipe Cactus National Monument
Carol Young, Environmental Manager, Tohono O'odham Nation
Sam Spiller, State Supervisor, USFWS, Phoenix, AZ

General NEPA Comments

Purpose and Need

The Purpoee and Need Statement did not clearly explain the need to change the current management practices being implemented in the Monument nor was there a sufficient discussion of the current conditions at the Monument. The NPS deecribed a need for the plan in terms of recognition of the Monument as a unique global and regional park by UNESCO and through existing legislation for the Organ Pipe National Monument. A more thorough discussion of the need for the plan follows in a section titled "Direction for the Plan", but there is no brief, concise statement of the need for the Plan following the statement of purpose. An appropriate need statement should briefly identify the fact that the Monument ie receiving more and more annual visitors, that there are potential impacts upon the Monument due to the passage of NAFTA, and that there is no current comprehensive management plan in place being implemented by the NPS to address preeervation of the Monument's natural and cultural resources while ensuring a quality visitor experience. We recommend that the NPS formulate a brief statement in the Final EIS (FEIS), that will clearly summarize the Purpose and Need for the General Plan. We also recommend that in the Final EIS, the NPS provide a detailed analysie of the current conditions of the Monument in one section of the document.

Alternatives

We strongly suggeet that the NPS examine other reaeonable alternatives that were not identified in the document or that were dropped from consideration. We suggest that the NPS examine an alternative that evaluates minimizing the use of the Monument and the sensitive areas within the Monument. There are concerns identified in the DEIS euch ae unrestricted and unguided visitation, in the Quitobaquito area particularly, and theft and poaching throughout the Monument. We suggest that the NPS discuss an alternative of controlling the numbers of visitore by implementing a program, such as a fee or reeervation system. Ae part of this discuesion the NPS should addrese how this alternative will affect poaching, theft at the historic properties, and the Quitobaquito area. We also suggest that there may be opportunities to improve facilities or change the current use of existing facilities, visitor and employee, that may meet the Purpose and Need for the management plan. For example, there is no justification in the DEIS that a 6,000

EPA COMMENTS:
NATIONAL PARK SERVICE, ORGAN PIPE CACTUS NATIONAL MONUMENT
DRAFT GENERAL MANAGEMENT PLAN/EIS JULY 1995

square foot visitors center will be necessary to meet the stated purpose and need, as oppoeed to a 3,000 square foot visitore center or upgrading and expanding the current facilities. The NPS could develop a matrix approach to the plan which would include improving existing facilitiee, constructing new facilities at a minimal level, constructing only the Science and Resource center, reducing the numbers of overnight visitors and dispereing the visitation across other areas, for example constructing only 15 miles of new maintained trails in the areae of great visitor interest.

Mitigation

A programmatic-level EIS, euch ae a General Management Plan, should provide a framework for more detailed plans and studies including mitigation meaeures to minimize the impacte from the implementation of the varioue parte of the project. The FEIS should discuss direct and indirect impacts on areas where the NPS knows there will be development and trail management and the measuree that will be employed to mitigate those impacts. The NPS should refer to the CEQ regulations implementing NEPA, 40 CFR 1500-1508, specifically sections 1502.14(f), and 1508.20, regarding terms to use when discuesing mitigation.

Since the NPS plans to implement these projects over the next seven to nine years, we suggest that the FEIS discuss any foreseeable changes (in exieting site design and location plans), which could either affect the priorities identified in the DEIS or introduce significant new resource management issues. The FEIS should explain how the NPS will monitor impacts from these projects to ensure consietent management techniques are applied throughout the monument.

The FEIS should identify epatially or temporally related projects and should address cumulative and indirect impacts, including all potential impacts that may be out of the control of the NPS (40 C.F.R. 1508.7 and 1508.8).

Carrying capacity

The DEIS indicates that the Monument'e carrying capacity was determined (pg. 19), yet that information is referred to only in the discussion of the proposed alternative. We recommend that the data that wae collected be summarized in a table indicating the carrying capacity of particular areae compared to the actual and projected numbers of persons vieiting those areas. This information will provide a snapshot of the current conditions of

the Monument and the areas that are experiencing overutilization. It will also give the public and other agencies a better understanding of the rationale for improvements to certain areas.

Land use plans

The DEIS does not identify conflicting land uses in any of the federal, state, or tribal lands within or around the Monument and the potential effects from land use decisions by these other entitiee. Also, it is difficult to understand what parcels of land are involved in the swap discussed on page 38 and what will be the benefits to the Monument. The Final EIS should discues the potential outcome and benefits of the land swap with the Tohono O'odham Nation in much greater detail. The FEIS should discuss the management plans currently being employed at the Cabeza Prieta National Wildlife Refuge, and how the projected increase in visitors to the Monument may impact this area if the preferred alternative ie implemented. The FEIS should also, discuss in much greater detail the impacts of an increase in visitors and changes in the Monument upon the Lukeville area, including induced growth. The FEIS should address if there is an adequate infrastructure in Lukeville to accommodate more people and if not, what are eome of the possible remedies that may be employed.

Trail and Wayside Development

The DEIS indicates that there will be a significant new maintained trail system in the Monument. However, the document does not provide locations for many of these trails nor does it discuss the individual and cumulative impacts from the proposed trails. We recommend that the FEIS provide maps and a discussion of the proposed trail system, including those in sensitive areas and discuss what the direct, indirect, and cumulative impacte from the construction and maintenance and usage of these trails. Similar information should be provided in the discussion of the pullouts and wayside exhibite. The DEIS does not provide a map indicating the location of the proposed wayside-pullouts. The description of these areas should include information regarding the size, location, and numbere of vehicles or people each area will accommodate.

Quitobaquito Wetland

We have a number of concerns regarding the development of the trail system around the Quitobaquito wetland area. While we appreciate the effort to develop the trail system in the area to

reduce trampling damage to vegetation, we feel that the NPS should more carefully analyze the impacts from having a maintained eystem in this area. We are concerned that the area may become a magnet for visitors that in the past normally would not have visited the area due to its remote location in the monument. We recommend that the NPS conduct a separate carrying capacity analysis of the area to determine the numbers of visitors that the area can support without damage to the ecosystem and discuss the potential impacts from an increase in visitation to the area.

Mitigation Measures

At several points, the DEIS identifies problems with poaching of native flora and fauna, theft and vandalism at Historic sites, and animal mortality due to Highway 85. Yet, the document does not discuss in any detail the mitigation measures that the NPS will utilize to reduce these impacts. We suggest that the FEIS indicate what procedures the NPS has explored in an effort to reduce the impacts on the Monument's resources. For example, the FEIS should diecuss if the NPS has examined the possibility of constructing culverts under Highway 85, particularly in the area of the Mexican Rosy Boa habitat, in order to reduce the rate of mortality caused by the reptiles crossing the road. Also, what is the NPS plan for reducing the problem with poaching, outside of increasing patrols in problem areas?

Threatened and endangered epecies

EPA strongly encourages the NPS's continued coordination with the Fish and Wildlife Service in identifying Threatened and Endangered speciee, in accordance with the Endangered Species Act. We note that the USFWS identified the T & E species and epecies of concern that are within the monument. However, there is no significant diecussion of the potential impacts from the implementation of the alternatives to these threatened and endangered epecies particularly in the Quitobaquito area. The DEIS etates that the development of a trail eystem will help the endangered species populations in this area but never identifies the adverse impacte from a change in the amount of use in the area. The DEIS does not discues or suggest any specific mitigation techniquee for thie area or for any other T & E species that may experience adverse impacts. This is particularly true for the Endangered Lesser Long-nosed bat. The document statee (pp. 111 and 112) that the expansion of the Alamo campground may have an indirect adverse impact on the largest

maternity colony of this bat species yet there are no mitigation measures discussed in order to remedy these impacts. This is a serious omission in the document and we recommend that the NPS conduct the Endangered Species Act Section 7 consultation with the Fish and Wildlife Service and include it in the FEIS. Further mitigation techniques should be discussed and outlined so that will be a reference for future development projects.

Working closely with Tribal Authorities

In keeping with Executive Order 12898, **Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations** (EO 12898), the FEIS should describe the measures taken by the NPS to fully analyze the environmental effects of the proposed Federal action on minority communities and low income populations. The intent and requirements of EO 12898 are clearly illustrated in the President's February 11, 1994, Memorandum for the Heads of all Departments and Agencies, attached. We recommend that the NPS work closely with the tribal councils or governments in the areas where there will be trail development in or near sacred tribal lands, and that the NPS recognize and develop mitigation measures for environmental impacts identified by tribal councils and governments. The NPS should notify the tribal governments of any proposed trail alignments well in advance of development so that the tribes have ample opportunity to notify the NPS of the suitability of the alignment. The NPS should also ensure that the Tribal governments have access to all public information relating to the environmental planning of the Monument.

AIR RESOURCES

The DEIS states that the Organ Pipe Cactus National Monument is a Class II attainment area and that the NPS is exploring the possibility of reclassifying the area as a Class I attainment area. However, there is an insufficient discussion in the DEIS of the air impacts from the construction and use of trails, roads, and facilities within the Monument. We disagree with the statement on page 109 that the amount of road dust will remain at existing levels under the preferred alternative. The NPS provides no basis for the statement and we believe that under the preferred alternative, with significant increases in visitors and construction activities, that the amount of road dust and PM10 will increase. The NPS should address this issue in much greater detail in the FEIS, and discuss mitigation measures that could be employed along the unpaved roads in order to reduce any localized or long term air impacts.

We commend the NPS for proposing a comprehensive air quality program to protect the monumente air quality. We encourage the NPS to proceed with this program and suggest that implementation of such a program may assist them in answering the questions posed above as well as monitoring the changes in air quality due to the increased numbers of visitors within the Monument.

WATER RESOURCES

The DEIS does not state the level of direct or indirect impacts to wetlands. The FEIS should address the impacts that Monument and trail developments may have on the Quitobaquito wetland area in greater detail. It would be prudent to discuss the current wetland management techniques that are used, and to incorporate any appropriate management techniques into the FEIS. If you have specific questions concerning wetlands, please contact Mr. Jeff Rosenbloom, Chief, Wetlands and Sediment Management section at (415) 744-1962.

Also, the Quitobaquito area identified in the DEIS could be subject to serious erosion impacts due to the construction and maintenance of the trail system proposed for the area. We are concerned the NPS does not offer an erosion control plan to be implemented within the monument. We recommend that the NPS place a preliminary erosion control plan in the Final EIS as the reference for future environmental documents. We are including an outline of erosion control management practices for guidance on methods that can be used to minimize erosion from trail, road, and building construction projects.

The DEIS indicates that a water conservation program will be implemented in the Monument. We recommend that the NPS outline this water conservation program and commit to its implementation in the FEIS.

OTHER ISSUES AND CLARIFICATIONS

The Draft EIS did not contain a Glossary of terms nor an Index. The Final EIS should.

Attachment A

Erosion

1. Schedule projects so clearing and grading is done during times of minimum erosion potential.
2. Mark and clear off only areas essential for construction.
3. Avoid disturbing vegetation on steep slopes or other critical areas such as highly erodible soils and areas that drain directly into sensitive water bodies.
4. Route construction to avoid existing and newly planted vegetation.
5. Protect natural vegetation with fencing, tree armoring.
6. Cover or stabilize topsoil stockpiles.
7. Use wind erosion controls to act as wind barriers such as solid board fences, snow fences and bales of hay.
8. Seed and mulch disturbed areas.

Siting Roadways and Bridges

1. Consider the type and location of permanent erosion and sediment controls such as vegetative buffer strips, grass swales, energy dissipators and velocity controls.
2. Avoid marshes, bogs and other low-lying lands subject to flooding.
3. Avoid locations requiring excessive cut and fill.
4. Avoid locations subject to subsidence, land slides, rock outcroppings and highly erodible soils.
5. Size right-of-ways to include space for siting runoff pollution control structures, as appropriate.
6. Avoid locations requiring numerous river crossings.
7. Direct pollutant loadings away from bridge decks by diverting runoff waters to land for treatment.

THE WHITE HOUSE

WASHINGTON

February 11, 1994

MEMORANDUM FOR THE HEADS OF ALL DEPARTMENTS AND AGENCIES

SUBJECT: Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Today I have issued an Executive order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. That order is designed to focus Federal attention on the environmental and human health conditions in minority communities and low-income communities with the goal of achieving environmental justice. That order is also intended to promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority communities and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.

The purpose of this separate memorandum is to underscore certain provision of existing law that can help ensure that all communities and persons across this Nation live in a safe and healthful environment. Environmental and civil rights statutes provide many opportunities to address environmental hazards in minority communities and low-income communities. Application of these existing statutory provisions is an important part of this Administration's efforts to prevent those minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.

I am therefore today directing that all department and agency heads take appropriate and necessary steps to ensure that the following specific directives are implemented immediately:

In accordance with Title VI of the Civil Rights Act of 1964, each Federal agency shall ensure that all programs or activities receiving Federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin

Each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969 (NEPA). 42 U.S.C. section 4321 et seq. Mitigation measures outlined or analyzed in an environmental assessment, environmental impact statement, or record of decision, whenever feasible, should address significant and adverse environmental effects of proposed Federal actions on minority communities and low-income communities.

Each Federal agency shall provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of meetings, crucial documents, and notices.

The Environmental Protection Agency, when reviewing environmental effects of proposed action of other Federal agencies under section 309 of the Clean Air Act, 42 U.S.C. section 7609, shall ensure that the involved agency has fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects.

Each Federal agency shall ensure that the public, including minority communities and low-income communities, has adequate access to public information relating to human health or environmental planning, regulations, and enforcement when required under the Freedom of Information Act, 5 U.S.C. section 552, the Sunshine Act, 5 U.S.C. section 552b, and the Emergency Planning and Community Right-to-Know Act, 42 U.S.C section 11044.

* * *

This memorandum is intended only to improve the internal management of the Executive Branch and is not intended to, nor does it create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person.

William J. Clinton

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ARIZONA ECOLOGICAL SERVICES STATE OFFICE
2321 W. Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951

Telephone: (602) 640-2720 FAX: (602) 640-2730

RECEIVED
ORGAN PIPE CACTUS N.M.
AUG 28 '95

ACTION	INFO		INITIAL
		Superintendent	
		Admin Officer	
		Chief Ranger	
		Chief, Res. Mgmt.	
		Chief, Maintenance	
		Chief, Res. Educ.	
		Betty	

August 24, 1995

In Reply Refer To:
AESO/SE
2-21-89-I-078

MEMORANDUM

TO: Superintendent, Organ Pipe Cactus National Monument, Ajo, Arizona

FROM: State Supervisor

SUBJECT: Review of Draft General Management Plan/Development Concept Plans/Environmental Impact Statement for Organ Pipe Cactus National Monument

We have reviewed the subject document and offer the following comments.

The document indicates that consultation had been conducted with the Fish and Wildlife Service with reference to an issued (June 16, 1994) species list. If, as the document also states, listed species will be affected by actions of the alternatives, then consultation should go beyond development of a species list. Specifically, the document states that the endangered lesser long-nosed bat (Leptonycteris curasoae yerbabuenae) and Quitohaquito desert pupfish (Cyprinodon macularius eremus) may be impacted by actions described in the proposal. Although no direct loss of habitat is expected, the document states that the species could potentially be affected by human-induced disturbance, mortality, or habitat degradation. In the same paragraph, however, the document states that the preferred alternative is expected to have either no effect, a beneficial effect, or is not likely to adversely affect listed species. Thus, if a determination of effect is actually made and presented in the document, the Service cannot find it. The document only very briefly specifies how listed species could be potentially affected. We recommend that an adequate biological assessment of the effects of the proposed action on all listed species that are in the project area be conducted. If the Park Service determines that the action is likely to adversely affect listed species, then those effects must be eliminated or formal consultation must be conducted with the Service.

The document outlines the National Park Service's course of action in considering listed species to consist of surveying areas proposed for development prior to undertaking an action; if listed species were determined to be occupying such sites the Park Service would

consult with the Service to determine appropriate mitigation measures to avoid adverse impacts. The Service agrees that surveys should certainly be part of the assessment of effects to listed species that may result from a project. However, listed species may also be affected by actions even if habitat is not currently occupied. Such situations should also be addressed and evaluated in a biological assessment.

Since the June 16, 1994, species list was issued, the status of the cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum) has changed. It is now proposed as endangered with proposed critical habitat. We are concerned about the proposed addition of a new campground at Alamo Canyon under the preferred alternative. Without a map of the proposed action, it is difficult to evaluate it. Placement of a new campground at Alamo Canyon needs to be done in the context of not adversely affecting proposed critical habitat for the cactus ferruginous pygmy-owl.

We believe the preferred alternative would greatly stabilize Quitobaquito snail habitat. The plan should address actions identified in the Pupfish Recovery Plan. It should address implementing recovery actions for all species, where appropriate.

Thank you for the opportunity to review the draft document. If we can be of further assistance, please contact Bill Austin or Bruce Palmer.

Sam F. Spiller

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (AES)
Director, Arizona Game and Fish Department, Phoenix, AZ

Appendix C: Comment Letters on the Supplement

Because the comments in the following letters have not been discussed in public forums, all of them are printed in this Appendix, in the order listed on the following index. They include the public agency and tribal government letters that are required to be printed.

Public Agency and Tribal Government Comment Letters
Arizona Department of Transportation, Highways Division
Arizona Game and Fish Department, Regional Habitat Program
Tohono O'odham Nation, Gu-Vo District and Hia-Ced O'odham Program
U.S. Bureau of Indian Affairs, Papago Agency
U.S. Bureau of Land Management, Arizona State Office
U.S. Bureau of Land Management, Phoenix District Office
U.S. Environmental Protection Agency

University Comment Letters
University of Arizona, College of Arts and Sciences
Department of Ecology & Evolutionary Biology, Malusa, Jim
University of Arizona, College of Arts and Sciences,
Department of Ecology & Evolutionary Biology, Rosen, Phillip

Special Interest Groups
Defenders of Wildlife, Wildlife Counsel
Economic and Environment Association
Traditional O'odham Leaders of the Traditional O'odham in Mexico

Individual and Business Comment Letters
Bellingham, John and Betty
Cole, Douglas
David Gabrielle
Fahn, Jack D. and Betty H.
The Guest House Inn, and Mine Managers Inn Bed and Breakfast
Panther, Jeff
Rogers, Roc

Petition Letters
The NPS received copies of one petition with hundreds of signatures. The petition has been numbered, the key subject matter defined, and the person or group is listed who submitted the petitions to the National Park Service.

FIFE SYMINGTON
Governor

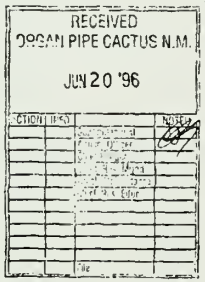
LARRY S. BONINE
Director

ARIZONA DEPARTMENT OF TRANSPORTATION

INTERMODAL TRANSPORTATION DIVISION
Tucson District
1221 S. Second Avenue, Tucson, Arizona, 85713-1602
Phone (520) 620-5412

THOMAS G. SCHMITT
State Engineer

June 17, 1996



Mr. Harold Smith, Superintendent
U.S. Department of the Interior
National Park Service
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo AZ 85321-9626

Dear Harold

A review of the Biological Assessment for the Organ Pipe Cactus National Monument General Management Plan on Threatened and Endangered Species has been conducted by this office

We are concerned with your proposals affecting State Highway 85. To what extent is motorist education being planned and implemented? What is the Parks schedule for constructing underpasses on the highway? When will the Park change the wire on the right of way fence? Funding, timing, and details of all your proposals are of particular concern to the Arizona Department of Transportation.

State Highway 85 is a significant corridor within the State and has been identified as a NAFTA Corridor. We are concerned about the movement of people and goods from the United States to Mexico, whether it be on business or recreation.

Safety of the highway is paramount in our mission and goals. The Department will continue to maintain and operate the highway in a safe manner and we look forward to our mutual working relationship with you in the future as we have in the past.

Sincerely,

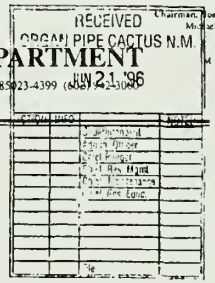
William J. Higgins, P.E.
Tucson District Engineer

WJH.dlo

c: Michael LaBorgne
August Hardt
Rick Heredia

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT
2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000



June 19, 1996

Mr. Harold J. Smith
Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

Re: Supplement to the Draft General Management Plan, Development Concept Plans, Environmental Impact Statement; Organ Pipe Cactue National Monument (Monument), National Park Service (Service)

Dear Mr. Smith:

The Arizona Game and Fish Department (Department) has reviewed the above-referenced document, released March 25, 1996. The Department regrets the delay in our response. We appreciate the Service's efforts to address issues identified in our previoue letter of August 29, 1995. The following commente are provided for your coneideration.

GENERAL COMMENTS

- The Department eupports the new, redeeigned Quitobaquito development plan, ae deecribed on Page S-39.
- Regarding new trails and campgrounde, the Department commende the evaluation of potential impacts to wildlife at the Alamo Canyon campground. The Department requeste the opportunity to evaluate these developmente on a caee-by-case basis when more detailed plans become available.
- The majority of roadkille and wildlife observations appear to occur where State Route 85 intersects mountainous outcrops and major waehee. Along SR 85, there are five locatione that generally fit this deecription. We recommend targeting theee areas for new culverts or modified culvert designs. Educational eigns and a reduction in vehicle epeeds in theee areas aleo ie anticipated to reduce the number of roadkille.
- The Department supporte the proposal to install bat-acceseible gates in bat maternity areas near Alamo Canyon (page S-83). Theee gates, along with informative signs, can be effective management toole to prevent disturbancee of bat habitat.

- The Department would appreciate the opportunity to participate in multi-agency work groups, such as those described for SR 85 corridor planning efforts, and for the preparation of a Wilderness Management Plan for the Organ Pipe Cactus Wilderness.

PAGE-SPECIFIC COMMENTS

Page S-16, Wildlife Management

Similar to wording in the section on Threatened, Endangered and Sensitive Species (Page S-17), the Department recommends that other wildlife management actions on the Monument also be coordinated with our agency.

Page S-81, Sonoran Pronghorn

Because Quitobaquito Springs could be a water source for Sonoran pronghorn, the Department recommends that this section address any potential impacts to pronghorn resulting from implementation of the Quitobaquito plan.

Page S-83, Cactus Ferruginous Pygmy Owl

It is stated in this section that the last known occurrence of cactus ferruginous pygmy-owl was in 1993. We request that this information be updated to include two observations from 1995 and three observations from 1996, as identified by Monument staff.

Thank you for the opportunity to provide these comments. If you have any questions, please contact Mr. John Kennedy, Yuma Regional Habitat Program Manager, at (520) 342-0091.

Sincerely,

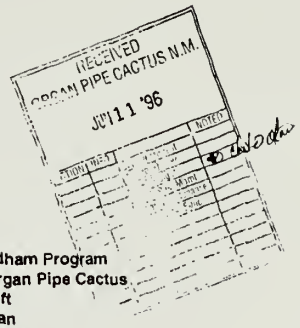
Ron Christofferson

Ron Christofferson
Project Evaluation Coordinator
Habitat Branch

RAC:NLO:no

cc: Larry Voyles, Regional Supervisor, Region IV, Yuma
Terry Johnson, Chief, Nongame Branch

AGFD# 4-08-96(13)



May 22, 1996

Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

Gu-Vo District and the Hia-Ced O'odham Program
Response to the Supplement to the Organ Pipe Cactus
National Monument Draft
General Management Plan
Development Concept Plans
Environmental Impact Statement

The Supplement to the Organ Pipe Cactus National Monument General Management Plan was extremely difficult to understand to adequately compile a reply due to the unclear method it was presented. There is no clear direction in which alternatives will be implemented in the final Management Plan.

To adequately respond to the Management Plan we request the National Park Service to provide sufficient time to review the final draft before it is submitted for approval.

It was also unclear if the additional recommendations previously submitted by the Gu-Vo District and the Hia-Ced O'odham Program were considered as we did not receive any written response or acknowledgement, we therefore resubmit our initial statement. (attachment 1)

The supplement makes an emphasis on the desire of the Organ Pipe National Monument to enter into a consultation understanding with the Tohono O'odham Nation, it is our recommendation that the April 29, 1994, Executive Directive issued the agencies of the Federal Government to operate in a government to government relationship with Federally Recognized Tribes, be implemented. (attachment 2)

It is also our desire to enter into this reletionship with the National Monument to fully participate in the Management Plan of the Organ Pipe Cactus National Monument.

We believe that it would be beneficial to both the Organ Pipe Cactus National Monument and the Tohono O'odham Nation that an agreement is reached for the National Monument to better understand how important this region and the ecosystem is to the O'odham and assure an acceptable consultation arrangement with the Tohono O'odham Nation under existing laws.

Recommendations and Questions:

1. The Gu-Vo District and the Hia-Ced O'odham Program continue to stress the importance of including in the Management Plan of the Organ Pipe Cactus National Monument an assurance that the O'odham will have authorized free access to sacred and significant sites to continue traditional cultural and religious practices.

2. The Gu-Vo District and Hia-Ced O'odham Program urge the National Park Service to reconsider the re-establishment of an O'odham community in the Quitobaquito areas under the design of the Man and the Biosphere Concept.

3. We recommend a direct and continued communication arrangement be established between the Gu-Vo District and the Organ Pipe Cactus National Monument since the Gu-Vo District is directly on the border, neighboring the Organ Pipe Cactus National Monument.

4. In case of emergencies due to natural disasters or unfortunate accidents it would be advantageous to both parties that a cooperative arrangement is established between the Gu-Vo District and the Organ Pipe Cactus National Monument.

5. To confirm for documental purposes we recommend to the National Park Service with Tohono O'odham representation conduct an anthropological research to establish affiliation of the O'odham to the Organ Pipe Cactus National Monument area.

6. Another concern that is in the supplement on page S-110, Appendix I: Mitigation Measures and Development Constraints, we strongly disagree and express that in our view mitigation is not sufficient to the management of significant cultural, sacred and religious sites.

7. On Page S-16, we request more information on the Ecological Monitoring Program (EMT) and request full Tohono O'odham participation in the study.

8. The International Water Assessment proposed in the supplement should include other agencies such as IBWC and Mexican counterparts.

9. What is the Organ Pipe Cactus National Monument doing to address and prevent Air Pollution from Mexico?

10. What is the Draft Aircraft monitoring and management program? Page S-19

We hereby request a written reply to our proposal and how we can work together to better protect and manage our traditional territories.

Thank you for your continued support.

Submitted:

Ophelia Rivas, Chairperson
Gu-Vo District

Fernando Valentine, Supervisor
Hia-Ced O'odham Program

cc: Edward Manuel, Chairman, Tohono O'odham Nation
Henry Ramon, Vice-Chairman, Tohono O'odham Nation
Joseph Joaquin, Chairman, Culture Preservation Committee
Bruce Babbit, Secretary of Interior
Ed Pastor, Representative
John McCain, Representative
Jim Kolbe, Representative
John Christensen, Bureau of Land Menagement

RECOMMENDATIONS OF THE GU-VO DISTRICT AND HIA-CED O'ODHAM PROGRAM REVIEW GROUP TO THE ORGAN PIPE CACTUS NATIONAL MONUMENTS' CONCEPT GENERAL MANAGEMENT PLAN

June 7, 1995

O'odham presence in the Sonoran Desert region has been since time immemorial, and the O'odham Spirituality and Cultural relationship to the aboriginal territories is based on the belief that the whole ecosystem is Sacred. Through this belief the O'odham have engaged in traditional survival activities in this region while maintaining an environmental balance and preservation of the area

The O'odham appreciate the opportunity to make recommendation to the Organ Pipe Cactus National Monument's General Management Plan, Development Concept Plans and Environmental Impact Statement. The O'odham have established a good relationship with the monument due in large part to the efforts of the Superintendent--Harold Smith. The O'odham wish to ensure that this relationship maintained and strengthened with future monument personnel. The development of a Memorandum of Understanding as proposed in the General Management Plan is a positive mechanism to insure O'odham participation in the management of the cultural and natural resources in the region.

There is an alternative proposal that the Organ Pipe Cactus National Monument may consider and that is a Intergovernmental Agreement with the Tohono O'odham Nation which may be more beneficial to their interests.

Proposals in the General Management Plan have raised a number of issues that are of concern to the o'odham. The following proposals are presented with the intention that they be incorporated as an Appendix in the Final General Management Plan for the Organ Pipe Cactus National Monument. Some of the recommendations are based on the principles of the United Nations Man and the Biosphere Program which was designed to include the participation of people indigenous to the area

Development Plans: Quitobaquito Management Area

Objections to Alternative 1 on the following grounds:

1. We do not want to draw attention to the Salt Trail which is sacred.

2. We do not want the Salt Trail used as access to the Quitobaquito Basin.

3. We object to the possibility that the Salt Trail would require alteration--grading smoothing, paving to provide access for all visitors. This objections is based on the sacred nature of the trail and the fact that it is sacred and a portion of the trail is a recorded archeological site.

4. The Salt Trail passes through a number of archeological sites. Use of the O'odham Salt Trail by visitors would increase access to sites that are already fragile. Routing visitors through these sites would result in damage.

5. The O'odham were not consulted regarding the Quitobaquito Management Plan. Planners in Denver decided what to do without taking into consideration O'odham ideas about a place that is sacred to us. One or two meetings over the years does not constitute consultation. Secondly, individuals were consulted and these individuals do not speak for or represent the ideas of the O'odham people

Objections to Alternative 2 on the following grounds:

1. Parking lot is within an archeological site and an area that was used historically by the O'odham.

2. Toilet facilities are within an archeological site and an area that was used historically by the Hia-Ced O'odham.

Alternative 3, minimal development of the area while providing access, is being proposed as the best action for Quitobaquito. Minimal development is desired to prevent unnecessary damage to the natural, historic and riparian habitat:

1. Remove present parking lot and establish a new parking lot in a mutually agreed upon location outside the Quitobaquito basin.

2. Use a portion of the old road as the visitor trail into the Quitobaquito area. Walking the old road is easier for the visitor and requires less work and money to develop.

3. Restoration/revegetation of disturbed areas (including that portion of the present road not used as a trail) to a natural state.

COMMENTS

4 Archeological survey of a larger area to identify archeological and O'odham sites. Develop plan to protect them. The Quitobaquito culture area is a much larger area--include fields, houses archeological sites in Mexico and other archeological sites and villages on the US side.

5. O'odham input into interpretation of the area.

6. No car access from Mexico via a gate.

7. Increased protection or patrol of the Quitobaquito area. This could be best accomplished by an O'odham Ranger who understands the area. The O'odham Ranger could protect as well as interpret.

8. Creation of new and Enforcement of existing International Agreements to Protect and Conserve Air Quality and Water Quality.

9. O'odham input into any development plan regarding Quitobaquito.

10. Restrict future developments of new and existing Trails

Quitobaquito NR

The O'odham object to the Quitobaquito National Register Nomination in its current form. The O'odham objections to the current nomination include:

1. Concern that the O'odham would have to reveal more of their history that we do not want made public.

2. O'odham concerns and ideas were not taken into consideration. The current nomination involved only a few individuals and their opinions which are not necessarily a reflection needed particularly on this nomination.

Incorrect published information regarding the O'odham was used in the nomination

The cemeteries were not included in the NR boundary. The burial grounds are part of the culture of that place and need to be included in any nomination. The Quitobaquito culture area is a much larger area--include fields, houses, archeological sites in Mexico and other archeological sites and villages on the US side.

We are concerned that National Register status will attract more visitors thereby causing more damage to the fragile environment.

Actions:

1. The O'odham request that the nomination be rewritten to include our input. Rewriting of the nomination could be a joint O'odham-ORPI project.

2. The O'odham will revise incorrect published information that was used in the nomination. This will be done by the joint O'odham-ORPI project to clarify language and concerns.

3. The O'odham wish to restrict publication of sensitive information in the nomination.

4. The O'odham would like the NR boundaries expanded to include the cemeteries and areas in Mexico.

5. Archeological survey of expanded NR boundaries which will include O'odham participation.

6. The O'odham want strict protection for the area under Section 106 of NHPA once Quitobaquito is placed on the National Register.

7. The O'odham would like access to the Quitobaquito area restricted during ceremonies.

Natural and Cultural Resources:
Quitobaquito area

Concerns about the Quitobaquito area include:

1. Concern about loss of medicinal plants.

2. There is a concern that the ditch from the spring does not allow for flooding of adjacent areas that contain important medicinal plants. Work to correct this problem.

3. Concern about the decreasing of wildlife in the Quitobaquito area.

4. Stress that the O'odham are from there and recognize aboriginal territories.

5. Stress the importance of water to the O'odham.

6. How does the dropping water table in the Sonoyta Basin affect the springs?

Action:

1. Conduct a joint O'odham--ORPI Natural/Cultural Resource Project to conduct an ethnobotany study of the area with specific reference to medicinal plants and wildlife. O'odham people would identify and name plants and animals, the monument would document the number and location of the plants, animals and monitor the plants over time.

2. Conduct a joint O'odham--ORPI Natural/Cultural Resource Project to survey the area along the ditch from the spring to the pond. Do this survey at various times of the year to document where important plants are located. Work to insure that plant are getting sufficient water.

3. Include O'odham oral tradition of the culture history of the area and O'odham view on the sacredness of water in Interpretation of Quitobaquito.

4. Conduct studies to determine how dropping water table in Mexico is affecting the springs, and take steps to off set overdraft in Mexico.

National Register:

There is a need for increased consultation regarding National Register Nominations of Traditional Cultural Properties. Present O'odham views and concerns have not been taken into account in the National Register Nomination for Montezumas Head and Quitobaquito.

Current process involves only a few individuals and their opinions which are not necessarily a reflection of the majority and or minority view. Additionally, incorrect published information was used and referenced in both nomination. This information needs to be corrected.

Finally, there is a concern regarding access to information provided by the O'odham. Who has access to information contained in National register Nominations and various professional reports, such as the Quitobaquito Cemetery Report.

Actions:

1. The O'odham request that any future National Register nomination of historic and prehistoric sites be put on hold until an O'odham Advisory Committee is established.

Highway 85

We oppose any possible re-routing of commercial traffic through the reservation via the Gu Vo District.

Law Enforcement Issues:

Increased ORPI law enforcement pressure on drug runners has resulted in an increase in drug running activities through the Gu Vo District in the Kuakatch Wash area and Sweetwater Pass. The increase in drug traffic through these areas has a direct effect on the people.

Secondly, the O'odham have a number of concerns regarding the looting, vandalism, and pothunting at archeological sites and historic villages in the monument and the reservation.

Action:

1. Increased Back Country Patrol by ORPI Rangers in the following areas:

   * Kuakatch Wash
   * Sweetwater Pass
   * Ali Wau Pass

2. Training for O'odham police with ORPI Rangers.

3. Encourage and assist O'odham Police force in obtaining ARPA training.
   Develop and fund a joint task force (NPS & O'odham) on ARPA and Drug Enforcement.

4. ORPI Rangers, Tohono O'odham Police and U.S. Customs should take the lead in developing solutions to the law enforcement issues.

5. Encourage and assist O'odham Police force in obtaining training in Drug Enforcement.

Interpretation:

There is a need for greater involvement of O'odham in the Interpretative Division. The Sonoran Desert is the homeland of the O'odham--who better to explain the connection and importance of the water, land, plants, animals, and people. The O'odham believe the whole system is important: the entire Sonoran Desert is Sacred. Recognize aboriginal territories and stress that the O'odham are the desert people--the O'odham have survived and lived in harmony with the desert since the beginning.

Action:

1. Establishment of position for an O'odham on Interpretative Staff.

1. Continuation and expansion of O'odham Day (perhaps have special events spread out over a month or during the busy season).

3. Incorporate O'odham terms for places, plants, animals, etc., in interpretative programs, including exhibits.

4. Include O'odham view of natural and cultural history. For example, what is the importance of the saguaro? Why is water sacred?

5. Establish a way for O'odham to sell Arts and Crafts in the Visitors Center.

Land Exchange:

There are a number of concerns regarding the proposed land exchange between Organ Pipe and the Gu Vo District. We object to the proposed land exchange until we know what agreements have been made between previous officials of the Gu Vo District and National Park Service.

Actions:

1. Provide documentation regarding previous agreements made between the Gu Vo District and Organ Pipe on the proposed land exchange.

2. Conduct meetings between present officials and members of the Gu Vo District and Organ Pipe regarding the land exchange.

Culture History

The view of culture history presented int he GMP is that of Anthropologists and Archeologist. The O'odham creation stories also document the culture history of the people but their view was not included. The view of culture history by the O'odham and archeologist is not incompatible. They are different ways of telling the story, O'odham oral knowledge and scientific knowledge.

Action:

1. Include a section in the Culture, History that reflects the O'odham view of Culture History. The O'odham believe that they have always been here--since the beginning of time. This is shown by the ancient burial grounds. O'odham knowledge is based on the stories of creation and the chronicles which are fact. They believe that their origin is in the Pinacate and that the whole Papaguerie is a sacred place. Stress that water is sacred so that other people can learn to respect and honor it. Emphasis on the sacredness of water. When the water is disturbed then there are repercuesions which always affects the O'odham in a negative way. When the water disappears then it is the beginning of the end.

1. Clearly delineate that the archeological view of culture history is based on the study of artifacts and uses archeological terms and nomenclature.
"This section represents the findings of archeologist and the nomenclature they use. But the O'odham believe they have been here since the beginning".

Cultural Resources

Concerns and Actions:

1. Increased O'odham involvement

2. Hire park archeologist to work with O'odham.

3. Increased archeological site protection involving O'odham.

4. Identify historical documents and archival material relating to O'odham.

5. Encourage rejuvenation of O'odham ceremonies.
6. Stress traditional land use and values: Water, Land and Culture cannot be separated.

7. Identify what information is available on Historic Landscape and use of land and water resources.

Other Concerns, Issues and Recommendations:

- Establish an O'odham Commission with voting powers to direct management decisions under the Memorandum of Understanding/Intergovernmental Agreement, to represent the Tohono and Hia-Ced O'odham interests.

- The General Management Plan of the Organ Pipe Cactus National Monument include provisions in the Plan to require preservation of O'odham Sacred Sites and Cultural Areas.

- Develop a process to immediately notify O'odham representation upon discovery of O'odham Ancestral (Human) Remains, Properties and Artifacts exposed by nature or other means.

- The General Management Plan should incorporate the whole Monument area as a cultural and traditional use area of the Tohono and Hia-Ced O'odham and should recognize their aboriginal territories.

- Any future designation of sites under the National Register of Historic Places will be put on hold until an O'odham [illegible] is put in place

- Identify Institutions to assist in Enforcement and Creation of International Agreements to Protect and Conserve Air Quality, Water Quality and Quantity.

- The General Management Plan of the Organ Pipe Cactus National Monument include provisions in the Plan to grant unlimited access and unrestricted use of their Sacred Sites.

- To Restrict and Control delicate information concerning sacred sites, objects and cultural related artifacts to the public unless approved by the Tohono and Hia-Ced O'odham.

- Clarification of the processes of notification and consultation under NAGPRA for the discovery of human remains.

- Re-establish O'odham communities under MAB

- The Management Plan must include provisions for Rejuvenation of O'odham ceremonies

- Acknowledge and enforce protection of O'odham intellectual property rights in specific areas identified by O'odham representatives.

- Develop prevention programs to increase site protection and prevent desecration or un-repairable damage to delicate O'odham archeology

- Establishment of an O'odham Advisory Committee that would work with monument staff on issues regarding cultural and natural resources.

- Identification of your contact person at the monument (such as archeologist, cultural resource specialist)

- Clarification of the laws protecting archeological resources

- The nature and disposition (access) of various kinds of reports and files. This could include archeological reports (these reports are not available to the public-restricted access to NPS personnel), interviews, notes of meetings, videotape, and records of NAGPRA consultation

Actions:

- Provide tapes and correspondence of meetings between Larry Van Horn and various individuals and districts. Correspondence should cover both the GMP and National Register Issues.

- Clarify Organ Pipe position on International Agreements.

- Explore funding through the Mexican Affairs Office for joint Park status. What different protection and development is there for a park versus a monument.

- Support the development and funding of an Indian Affairs Office in the National Park Service.

Questions of the Organ Pipe Cactus National Monument Review Group
Gu-Vo District
Hia-Ced O'odham Program

What assurance do we have that the proposals we recommended be considered and implemented?

What assurance that the O'odham recommendations will be included as an appendix to the General Management Plan document?

The consideration of an Intergovernmental Agreement instead of an Memorandum of Understanding?

What is the position of ORPI on international agreements?
What agreements have been made between ORPI and the Gu-Vo District concerning the land exchange?

What existing information is available on Historic Landscape and use of land and water resources?

Will Quitobaquito qualify for protection under the Noth American Wetland Conservation Act? (Between the FWS, U.S., Canada and Mexico).

What is a National Register Designation? What impacts will it have on the site? What benefits will it provide to the Site?

What does the Mexican Affairs Office of the NPS do and can they (O'odham In Mexico) get help from them? Does the Mexican Affairs Office have grants that could be used for cooperative O'odham/Organ Pipe projects?

What is the difference between Monument and park status.

The group had serious concerns regarding the information Larry van Horn had obtained during meetings on the reservation. Who did he talk to? Did he talk to individuals and think that the persons views reflected what the district wanted? Did he talk to large groups where various people gave input?

COMMENTS

GU-VO DISTRICT GROUP
SIGN IN SHEET
5/10/95

1. Feux Salcido	Ali Chuqk
2 Eusebio Rivas	ALI CHUGK
3 Fernando Valentin	Hia Ced O'odham Program
4 Aurelia Montene	Ge aoio
5. Augustine Montono	Ge wo
6. Marco Rivera	Hia Ced O'odham Program
7. Adrianne J Rankin	National Park Service
8. Mary O. Pablo	Gu-vo
9. Ivan T. Juan	Gu-vo
Ophelia Rivas	Ali-chugk
Elsie Salcido	Ali chugk
12. Matilda Salcido	" "

Gu Vo District Group
May 18, 1995

1. Feux Salcido
2. Eusebio Rivas
3. Stella Manuel
4. Aurelia Montene
5. Augustine Montono
6. Renardo Valentin
7. Ivan Rivas
8. Irene M. Enas
9. Adrianne Rankin
10. Ophelia Rivas — Ali Chugk
11. Jerome Victor
12. Joseph T. Joaquin

RESOLUTION OF THE GU-VO DISTRICT GOVERNING COUNCIL
(Approval of the Gu-Vo District Cultural Advisory Group and
Hia Ced O'Odham Program Draft Statement)

RES. NO-96.0795

WHEREAS, the Gu-Vo District Governing Council on June 07, 1995 at a regular council meeting did resolve the following, and:

WHEREAS, the Gu-Vo District and the Hia Ced O'Odham Program believe that the spiritual and cultural relationship to ancestral territories is sacred, and:

WHEREAS, the Gu-Vo District and the Hia Ced O'Odham Program have a spiritual and cultural responsibility as O'Odham to maintain and protect these ancestral territories, and:

WHEREAS, the Gu-Vo District and the Hia Ced O'Odham Program based this statement on O'Odham beliefs and the voices of the elders who maintain the oral culture.

NOW THEREFORE BE IT RESOLVED, that the Gu-Vo District Council endorse and support the Draft Statement submitted by the Gu-Vo District Cultural Advisory Group and the Hia Ced O'Odham Program.

THEREFORE BE IT FURTHER RESOLVED, that the Gu-Vo District Governing Council request the Tohono O'Odham Nations Legislative Council to endorse and support the statement of the Gu-Vo District Advisory Group and the Hia Ced O'Odham Program to be submitted to the Organ Pipe National Monument Draft General Management Plan.

-CERTIFICATION-

The foregoing Resolution was duly adopted at a Gu-Vo District Governing Council meeting held on June 07, 1995 with a quorum of eight council members with a vote of: 08 FOR; 0 AGAINST; 0 NOT VOTING and 01 ABSENT.

Ophelia Rivas, Chairwoman

ATTEST:

Priscilla Thomas, Secretary

GOVERNMENT-TO-GOVERNMENT RELATIONS WITH NATIVE AMERICAN TRIBAL GOVERNMENTS

Here is the text of the Governmental Directive having to do with government-to-government relationships signed by President Clinton at his White House meeting with Indian tribal leaders.

Memorandum for the Heads of Executive Departments and Agencies

The United States Government has a unique legal relationship with Native American tribal governments as set forth in the Constitution of the United States, treaties, statutes, and court decisions. As executive departments and agencies undertake activities affecting Native American tribal rights or trust resources, such activities should be implemented in a knowledgeable, sensitive manner respectful of tribal sovereignty. Today, as part of an historic meeting, I am outlining principles that executive departments and agencies, including every component bureau and office, are to follow in their interactions with Native American tribal governments. The purpose of these principles is to clarify our responsibility to ensure that the Federal Government operates within a government-to-government relationship with federally recognized Native American tribes. I am strongly committed to building a more effective day-to-day working relationship reflecting respect for the rights of self-government due the sovereign tribal governments.

In order to ensure that the rights of sovereign tribal governments are fully respected, executive branch activities shall be guided by the following:

(a) The head of each executive department and agency shall be responsible for ensuring that the department or agency operates within a government-to-government relationship with federally recognized tribal governments.

(b) Each executive department and agency shall consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments. All such consultations are to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals.

(c) Each executive department and agency shall assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.

(d) Each executive department and agency shall take appropriate steps to remove any procedural impediments to working directly and effectively with tribal governments on activities that affect the trust property and/or governmental rights of the tribes.

(e) Each executive department and agency shall work cooperatively with other Federal departments and agencies to enlist their interest and support in cooperative efforts, where appropriate, to accomplish the goals of this memorandum.

(f) Each executive department and agency shall apply the requirements of Executive Orders Nos. 12875 ("Enhancing the Intergovernmental Partnership") and 12866 ("Regulatory Planning and Review") to design solutions and tailor Federal programs, in appropriate circumstances, to address specific or unique needs of tribal communities.

The head of each executive department and agency shall ensure that the department or agency's bureaus and components are fully aware of this memorandum, through publication or other means, and that they are in compliance with its requirements.

This memorandum is intended only to improve the internal management of the executive branch and is not intended to, and does not, create any right to administrative or judicial review, or any other right or

benefit or trust responsibility, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

The Director of the Office of Management and Budget is authorized and directed to publish this memorandum in the Federal Register.

(Signed) William J. Clinton

THE WHITE HOUSE, Washington, April 29, 1994

POLICY CONCERNING DISTRIBUTION OF EAGLE FEATHERS FOR NATIVE AMERICAN RELIGIOUS PURPOSES

Here is the text of the Governmental Directive having to do with the practice of Native American religions signed by President Clinton at his White House meeting with Indian tribal leaders.

Memorandum for the Heads of Executive Departments and Agencies

Eagle feathers hold a sacred place in Native American culture and religious practices. Because of the feathers' significance to Native American heritage and consistent with due respect for the government-to-government relationship between the Federal and Native American tribal governments, this Administration has undertaken policy and procedural changes to facilitate the collection and distribution of scarce eagle bodies and parts for this purpose. This memorandum affirms and formalizes executive branch policy to ensure that progress begun on this important matter continues across the executive branch.

Today, as part of an historic meeting with all federally recognized tribal governments, I am directing executive departments and agencies (hereafter collectively "agency" or "agencies") to work cooperatively with tribal governments and to reexamine broadly their practices and procedures to seek opportunities to accommodate Native American religious practices to the fullest extent under the law.

As part of these efforts, agencies shall take steps to improve their collection and transfer of eagle carcasses and eagle body parts ("eagles") for Native American religious purposes. The success of this initiative requires the participation, and is therefore the responsibility, of all Federal land managing agencies, not just those within the Department of the Interior. I therefore direct each agency responsible for managing Federal lands to diligently and expeditiously recover salvageable eagles found on lands under their jurisdiction and ensure that the eagles are promptly shipped to the National Eagle Repository ("Repository"). To assist agencies in this expanded effort, the Secretary of the Interior shall issue guidelines to all relevant agencies for the proper shipment of eagles to the Repository. After receiving these policies, practices, and procedures necessary in accordance with these guidelines to recover and transfer eagles to the Repository promptly.

I support and encourage the initial steps taken by the Department of the Interior to improve the distribution of eagles for Native American religious purposes. In particular, the Department of the Interior shall continue to adopt policies and procedures and take those actions necessary to:

(a) ensure the priority of distribution of eagles, upon permit application, first for traditional Native American religious purposes, to the extent permitted by law, and then to other uses;

(b) simplify the eagle permit application process quickly and to the greatest extent possible to help achieve the objectives of this memorandum;

RESOLUTION OF THE GU-VO DISTRICT GOVERNING COUNCIL
(Approval of the Gu-Vo District Cultural Advisory Group and Hia Ced O'Odham Program Response Statement to the ORPI Supplement to the General Management Plan)

RES. NO. 052396

WHEREAS, the Gu-Vo District Governing Council on June 23, 1996 at a regular council meeting did resolve the following, and;

WHEREAS, the Gu-Vo District and the Hia Ced O'Odham Program believe that the spiritual and cultural responsibility as O'Odham to maintain and protect these ancestral territories, and;

WHEREAS, the Gu-Vo District and the Hia Ced O'Odham based this statement on O'Odham beliefs and the voices of the elders who maintain the oral culture.

THEREFORE BE IT RESOLVED, that the Gu-Vo District Council endorse and support the statement submitted to the Supplement of the Organ Pipe Cactus National Monuments General Management Plan submitted by the Gu-Vo District Cultural Advisory Group and the Hia Ced O'Odham Program.

THEREFORE BE IT FURTHER RESOLVED, that the Gu-Vo District Governing Council request the Tohono O'Odham Nations Legislative Council to endorse and support the statement of the Gu-Vo District Advisory Group and the Hia Ced O'Odham Program to be submitted to the Supplement of the Organ Pipe Cactus National Monument General Management Plan.

-CERTIFICATION-

The foregoing Resolution was duly adopted at a Gu-Vo District Governing Council meeting held on May 23, 1996 with a quorum of eight council members present, with a vote of: 07 FOR; 0 NOT VOTING, 0 AGAINST and 02 ABSENT.

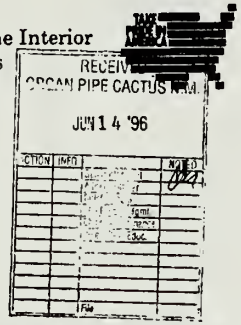
Ophelia Rivas, Chairwoman

ATTEST:

Priscilla Thomas, Secretary

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
PAPAGO INDIAN AGENCY
SELLS, ARIZONA 85634



IN REPLY REFER TO:

Environmental Quality

JUN 11 1996

Mr. Harold J. Smith
Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

Mr. Smith:

The Bureau of Indian Affairs Papago Agency has had the opportunity to review the Supplement to the Draft General Management Plan Development Concept Plans Environmental Impact Statement for the Organ Pipe National Monument. Based on our review, we offer the following comments:

1. The Tohono O'odham Nation should be consulted each and every time cultural and archaeological resources issues are to be discussed.

2. In administering archaeological surveys, mitigation or monitoring, the neighboring Indian groups should be contacted and informed of the discoveries each time a discovery situation occure, not when appropriate, as stated.

3. Borrow material extraction sites and spoil disposal on Tohono O'odham Nation lands is prohibited without further consultation with the Nation and further environmental studies.

4. If the monument improvement will require land exchanges or boundary amendments with the Tohono O'odham Nation, environmental surveys would be conducted for possible hazardous waste areas or inappropriate devslopments from previous land uses before any exchanges or amendments are finalized.

Thank you for providing us the opportunity to comment on the document. If you have any questions, please contact Minnie Mann at (520)383-3341.

Sincerely,

Superintendent
Papago Agency

cc: Environmental Quality Services
Phoenix Area Office

Research & Planning Operations
Tohono O'odham Nation

Agency file

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Arizona State Office
3707 North 7th Street
P.O. Box 16563
Phoenix, AZ 85011-6563

In reply refer to:
1792 (932)

RECEIVED
ORGAN PIPE CACTUS N.M.
JUN 17 '96

June 14, 1996

Mr. Harold J. Smith
Superintendent
Organ Pipe Cactus National Monument
Route I, Box 100
Ajo, AZ 85321

Oear Mr. Smith:

Thank you for the opportunity to comment on the Supplement to the Oraft General Management Plan/Development Concept Plans/Environmental Impact Statement (EIS) for the Organ Pipe Cactus National Monument. The Bureau of Land Management has the following general comments concerning the EIS.

Page S-19. An integrated pest management plan (IPM) is the use of several techniques, including grazing to gain control of a pest species. The monitoring and control of the Africanized honey bee can be addressed through an IPM. However, actions being considered to address the concerns related to trespassing cattle should not be considered part of an IPM.

Pages S-30 and S-58. The building of a facility on Federally owned lands can be pursued by several alternatives. This could include a Memorandum of Understanding or a Federal land withdrawal. Arizona Bureau of Land Management is currently undergoing a Field Organization Strategy and field office boundaries may change. The Organ Pipe National Monument is advised to work with the local field office if they wish to pursue this option.

Page S-32, Roads. Partnership agreements may be pursued with the appropriate BLM field office.

If you have any questions, please contact Gina Ramos at (602) 650-0511.

Sincerely,

For Michael A. Ferguson
Oeputy State Director
Resource Planning, Use
and Protection Division

Rediscover Your Public Lands

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Phoenix District Office
2015 West Deer Valley Road
Phoenix, AZ 85027-2099

In reply refer to:
1795(026)

RECEIVED
ORGAN PIPE CACTUS N.M.
MAY 30 '96

May 29, 1996

Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

Dear Mr. Smith:

Thank you for the opportunity to comment on the Supplement to the Draft General Management Plan/Development Concept Plans Environmental Impact Statement for the Organ Pipe Cactus National Monument. The broader Sonoran Desert interpretive theme and a regional management approach are ideas we share. We are encouraged by the groundwork which has taken place in the region and ere committed to participate in any way we can.

The BLM supports several features of the two new alternatives, nemely, the Multi-agency Information and Orientation Center as well as the development of a multi-agency wilderness end backcountry management plan which would include public lands north of the monument and the Cabeza Prieta wildernesses. BLM manages major access points to both areas, and has potential land use issues bordering Orgen Pipe Cactus National Monument that might influence the monument and wilderness.

From the standpoint of assessing environmental consequences, we suggest e more thorough appraisal of the effects on wilderness from the addition of the 12-15 miles of new trail "routes" (Puerto Blanco Loop Trail and Diaz Spire Loop Trail) under both elternatives on page S-77. Although the document states that the presence of these trails "is considered acceptable end appropriate in wilderness areas", it does not identify how these disturbances necessarily improve or maintein wilderness values.

Again, thank you for this opportunity.

Sincerely,

John R. Christensen
Aree Manager
Lower Gile Resource Area

Rediscover Your Public Lands

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

June 12, 1996

Stanley T. Albright
Regional Director
Western Regional Office
National Park Service
600 Harrison St., Suite 600
San Francisco, CA 94107-1375

Dear Mr. Albright:

The Environmental Protection Agency (EPA) has reviewed the **Supplement to the Draft General Management Plan Development Concept Plans Environmental Impact Statement** (SDEIS) for the **Organ Pipe Cactus National Monument**, Arizona. We are submitting the following comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations implementing NEPA (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The National Park Service (NPS) examined an additional two alternatives to what had been presented in the previous DEIS. These were described as the "new ideas alternative" and the "new proposed action alternative" which is the new preferred alternative. The stated purpose for the General Management Plan (GMP) is to guide the overall management and use in ways that will best serve visitors and preserve the values of the monument. The alternatives address management policies for natural, historic, and cultural resources, plans for visitor use facilities, interpretive sites, exhibits, trail development and Monument operations. Both alternatives would entail upgrading the existing trail systems and the creation of new trails. The new preferred alternative discusses a program of expanded natural and cultural resource protection, and visitor uses and information regarding the Monument. The Supplement mentions a plan to return several developed areas to a wilderness state.

In many respects the actions being proposed are relatively specific, while the impact assessments for this GMP are stated generally. Site specific implementation measures are discussed in the SDEIS, (some trail realignments and developments, facilities designs and locations, and the like) yet the associated impacts are not clearly indicated and will, in many cases, be discussed and disclosed in subsequent studies, agreements, and planning. The DEIS does mention that some specific design and management issues which are not covered in this document will be addressed in future detailed plans and studies and therefore, EPA strongly suggests that more detailed

analyses of specific impacts on the biological resources, water, and other aspects of the environment is necessary on a project by project basis.

Prior to those future planning stages we strongly believe that more detailed information should be included in the Final EIS, such as wilderness and trail management, specific mitigation measures, and guidelines and procedures regarding erosion control, drinking and ground water, threatened and endangered species, and land use inside and outside the Monument. This information could then be utilized as a baseline reference for subsequent NEPA documents. Having this framework in the Final EIS will help other planning agencies, such as the county and tribal council understand the basis for later NEPA documents and will help identify what should be addressed in any future cooperative agreements between agencies.

We are concerned that the level of detail in the analysis of the impacts to the environment did not increase with the discussion of the two new additional alternatives analyzed in the Supplement. We encourage the NPS to continue their monitoring programs of the groundwater resources, the carrying capacity at the Quitobaquito springs and Alamo Canyon areas, and threatened and endangered species populations and possible mitigation measures. However, we believe that some of these studies and agreements should have been completed and included in this Supplement and the DEIS, such as the discussions with ADOT on methods for the reduction of wildlife mortality and poaching from SR 85, and the wilderness management plan as it applies to each alternative.

There were several suggestions made for the administration of Monument's resources, such as groundwater and Quitobaquito spring protection, in a 1988 Special report on Treaties, Agreements, and Accords Affecting Natural Resource Management at the Organ Pipe Cactus National Monument, by Carlos Nagel of the University of Arizona. Mr. Nagel also examined the treaties and relationship of the area to the Tohono O'odham Nation and Mexico. Neither the Supplement nor the DEIS made mention of this report, and we would suggest that the NPS may want to consider this source of information when examining the next round of management decisions, i.e., the Quitobaquito springs DCP.

We are concerned that this Supplement and the DEIS outline decisions that will be made before studies are completed which the NPS recognizes must be done in order to finalize decisions on some of their proposals. Therefore, due to the lack of a complete impacts analysis, and because studies of impacts and mitigation measures which will allow the NPS to make further decisions as to the management direction of the monument still need to be performed, we have rated this Supplemental DEIS **EC-2 (Environmental Concerns--Insufficient Information;** see attached rating sheet). Our detailed comments, which are attached, suggest expanding the discussion of several areas of concern. We

would like to meet with the National Park Service in order to discuss these concerns further and perhaps clarify the requirements of NEPA.

We appreciate the opportunity to review your Supplemental DEIS. As part of the Final EIS response to comments the NPS should respond to these comments as well as the ones submitted in our letter of July 10, 1995. Please send two copies of the Final EIS to this office when the document is officially submitted to EPA Headquarters. If you have any questions, please call me at 415-744-1566, or contact David J. Carlson at 415-744-1577.

Yours truly,

David J. Farrel, Chief
Office of Federal Activities

Attachments (2)
#000069 orgnpgmp.dei

cc: Superintendent, Organ Pipe Cactus National Monument
Carol Young, Environmental Manager, Tohono O'odham Nation
Sam Spiller, State Supervisor, USFWS, Phoenix, AZ

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

General NEPA Comments

Purpose and Need

The Purpose and Need Statement from the DEIS was not modified in the Supplement and instead addressed the purpose and need only in terms of the reasons for providing a Supplement to the DEIS. The original Purpose and need statement did not clearly explain the need to change the current management practices being implemented in the Monument nor was there a sufficient discussion of the current conditions at the Monument. The NPS described a need for the plan in terms of recognition of the Monument as a unique global and regional park by UNESCO and through existing legislation for the Organ Pipe National Monument. A more thorough discussion of the need for the plan follows in a section titled "Direction for the Plan", but there is no brief, concise statement of the need for the Plan following the statement of purpose. An appropriate need statement should briefly identify the fact that the Monument is receiving more and more annual visitors, that there are potential impacts upon the Monument due to the passage of NAFTA, and that there is no current comprehensive management plan in place being implemented by the NPS to address preservation of the Monument'e natural and cultural resources while ensuring a quality visitor experience. We recommend that the NPS formulate a brief statement in the Final EIS (FEIS), that will clearly summarize the Purpose and Need for the General Plan. We also recommend that in the Final EIS, the NPS provide a detailed analysis of the current conditions of the Monument in one section of the document.

Mitigation

As we stated in our previous comment letter on the DEIS, a programmatic-level EIS, such as a General Management Plan, should provide a framework for more detailed plans and studies including mitigation measures to minimize the impacts from the implementation of the various parts of the project. The FEIS should discuss direct and indirect impacts on areas where the NPS knows there will be development and trail management and the measures that will be employed to mitigate those impacts. The NPS should refer to the CEQ regulations implementing NEPA, 40 CFR 1500-1508, specifically sectione 1502.14(f), and 1508.20, regarding terms to use when discussing mitigation.

Since the NPS plans to implement these projects over the next seven to nine years, we suggest that the FEIS discuss any

foreseeable changes (in existing site design and location plans), which could either affect the priorities identified in the DEIS or introduce significant new resource management issues. The FEIS should explain how the NPS will monitor impacts from these projects to ensure consistent management techniques are applied throughout the monument.

The FEIS should identify spatially or temporally related projects and should address cumulative and indirect impacts, including all potential impacts that may be out of the control of the NPS (40 C.F.R. 1508.7 and 1508.8).

Carrying capacity

The original DEIS indicated that the Monument'e carrying capacity was determined, yet that information was referred to only in the discussion of the proposed alternative. An appendix to the Supplement offered the data that wae collected in a table indicating the carrying capacity of particular areas. However, the data indicated number of parties, without defining party eize in terms of people and time frame of vieitation. We recommend that the FEIS contain a detailed discussion of the numbere presented in the table and what those capacities mean to the management of the resources in those areas. We are encouraged that the NPS plans to conduct a carrying capacity study for the Quitobaquito springs area to determine the level of visitor use, however we suggest that this study should have been performed as part of the DEIS process. Including the results of the study would have allowed the NPS decision maker and the public to make a better informed choice among the alternatives. We recommend that in the FEIS, the NPS discuss the results of the study if its complete or the elements that will be examined.

Land use plans

Neither the DEIS nor the Supplement identified conflicting land uses in any of the federal, state, or tribal lands within or around the Monument and the potential effects from land use decisions by these other entities. Please refer to our comments on the DEIS. The FEIS should discuss the wilderness management plans currently being employed at the Cabeza Prieta National Wildlife Refuge, and disclose the agreemente between the NPS and the USFWS as to the management decisions regarding the shared wilderness areae. The FEIS should also, discuse in much greater detail the impacts of an increase in visitors and changes in the Monument upon the Lukeville area, including induced growth. The FEIS should address if there is an adequate infrastructure in

Lukeville to accommodate more people and if not, what are some of the possible remediee that may be employed.

Wilderness Areas

Both the DEIS and the Supplement identified that 95% of the Monument was designated as Wilderness, and both documents stated that a wilderness management plan would be prepared. We believe that since such a large portion of the monument is designated as wilderness area that the wilderness management plan should have been included in the DEIS and this Supplement. By having both the wildernees management plan included in the GMP it would have enabled all parts of the monument to be examined in a cohesive manner providing for better decisions for the overall management direction of the monument. We recommend that the FEIS include a schedule for the wildernese management plan and etate that the NPS will release the plan ae a subsequent NEPA document. Also, the FEIS should discuss the mandatory criteria and guidelinee for management of the wilderness areas, the current syetem of wilderness management at the Monument, and identify the epecific wilderness management zones. We also remind the NPS that the decisions made in the wilderness management plan should support the decisions indicated here in the General Management Plan and that the GMP should not bias poesible alternatives for wilderness management.

Quitobaquito Wetland

We feel that the NPS should more carefully analyze the impacte from having a maintained trail system in this area. We encourage the NPS to complete the carrying capacity analysis, suggested in the SDEIS, to determine the numbere of visitore that the area can support without damage to the ecosystem and elaborate further on the potential impacts from a change in vieitation to the area.

Threatened and endangered speciee

EPA etrongly encourages the NPS'e continued coordination with the Fish and Wildlife Service in identifying Threatened and Endangered species, in accordance with the Endangered Speciee Act. We note that the USFWS identified the T & E epecies and epeciee of concern that are within the monument. The Supplement did not diecuss or euggest mitigation techniques for the epecies found in the Quitobaquito area or for any other T & E speciee that may experience adverse impacte, yet indicatee that further study and monitoring will be performed and mitigation measuree

will be proposed at that time. We recommend that the NPS conduct the Endangered Species Act Section 7 consultation with the Fish and Wildlife Service and include the results of the consultation in the FEIS. Further mitigation techniquee should be discussed and outlined so that will be a reference for future development projects.

Mitigation Measures

The Supplement diecussed problems with poaching of native flora and fauna, theft and vandalism at Historic sites, and animal mortality due to Highway 85. Yet, the document does not discuss in any detail the mitigation measuree that the NPS will utilize to reduce these impacte. We suggeet that the FEIS indicate what procedures the NPS has explored in an effort to reduce the impacts on the Monument'e resources. For example, the FEIS should discuss the arrangements that NPS has made with ADOT to regarding the possibility of modifying the road by constructing culverts under Highway 85 or implementing a driver education effort, particularly in the area of the Mexican Rosy Boa habitat, in order to reduce the rate of mortality caused by the reptiles crossing the road.

Working closely with Tribal Authorities

We commend the NPS for recognizing and including a discuseion of the Executive Order 12898, **Federal Actions to Address Environmental Justice in Minority Populations and Low-incoms Populatione (EO 12898).** We recommend that the NPS continue to work closely with the tribal councils and governmente in the area and recommend that the FEIS discuss any agreemente that were reached between the NPS and the Tribal authorities. The NPS ehould notify the tribal governments of any proposed trail alignmente and developmente well in advance of construction so that the tribes have ample opportunity to notify the NPS of the euitability of the alignment. The NPS should aleo ensure that the Tribal governments have accese to all public information relating to the environmental planning of the Monument.

WATER RESOURCES

The Supplement discuesee that the New proposed action alternative will disturb approximately 50 acree with development and construction activitiee. We are concerned the NPS does not offer an erosion control plan to be implemented within the monument. If greater than five acree of land are dieturbed by conetruction activitiee, project development, or project related

land disturbances, then these activities described in the Supplement and the DEIS could trigger the NPDES permitting requirements. According to the requirements in 40 CFR section 122.26 (b)(14)(x), the actions described may be subject to the General NPDES permit # AZR100000 for Discharge of Storm water runoff associated with construction activities. The NPS should complete and file the NOI with the EPA Clearinghouse and must develop and implement a Storm water pollution prevention plan containing Best Management Practices (BMPs) prior to commencing any construction. We recommend that the NPS place a preliminary erosion control plan in the Final EIS as the reference for future environmental documents. We recommend that the NPS describe euch BMPs and commit to implementing them in the Record of Decision (ROD).

The Supplement does not state the level of direct or indirect impacts to wetlands. The FEIS should address the impacts that Monument and trail developments may have on the Quitobaquito wetland area in greater detail. It would be prudent to discuss the current wetland management techniques that are used, and to incorporate any appropriate management techniques into the FEIS. If you have specific questions concerning wetlands, please contact Mr. Jeff Rosenbloom, Chief, Wetlands and Sediment Management section at (415) 744-1962.

We recommend that the NPS further elaborate on the water conservation program and the groundwater studies being performed at the monument now. We also recommend that in the FEIS the NPS provide greater detail on the impacts that have been experienced by the monument as a result of agricultural drawdowns from the Rio Sonoyta watershed. The NPS should also discuss possible agreements and actions that can be taken to reduce these impacts to the water systems inside and outside the monument. The water resources inventory that was eluded to in the Supplement should be included in either the FEIS or a subsequent NEPA document.

The Supplement indicates that a water conservation program will be implemented in the Monument. We recommend that the NPS outline this water conservation program and commit to its implementation in the FEIS.

THE UNIVERSITY OF
ARIZONA.
TUCSON ARIZONA

College of Arts and Sciences
Faculty of Science
Department of Ecology & Evolutionary Biology

Tucson, Arizona 85721
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Harold Smith
Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, Arizona 85321

31 May 1996

Dear Mr Smith:

The following comments pertain to the Supplement to the Draft GMP, DCP and EIS for Organ Pipe Cactus National Monument.

Thank you for sending me the recent update, which was presented in an entirely intelligible form, making it easier than usual to understand the differences between alternatives. I've been visiting Organ Pipe for over twenty years, and am glad to have a chance to comment on the Supplement.

I am in support of some aspects of both of the new alternatives, as follows.

Resource Management Facilities - These should be located near the interpretive center (below), so driving is minimized

Interpretive Facilities - I prefer moving the developed area of the park to Why (at least if there is the planned level of development). The old visitor center should remain simply because it isn't worth it (in terms of money spent enhancing the park) to remove it in order to restore a parcel alongside a highway which will unfortunately remain through the heart of the park

Also, given the apparent emphasis on the cultural diversity, I recommend that someone on the planning staff get abold of the plans used in building the new visitor center at Uluru National Park in Australia. I just returned from Australia, and this visitor center (for Ayer's Rock) is one of the best I've ever see. Everyone must enter through an unstaffed area of cultural displays - with photos, art, music, recorded interviews - before reaching what I would call the more typical visitor center. Those who aren't interested can cruise through, while others will definitely have their curiousity piqued by unfamiliar sights and sounds.

Camping - I'd like to see the Alamo campground maintained at its present size, and add the proposed walk-in sites to Twin Peaks. RV camping should only be allowed near the "new" visitor center near Why. Even at this locale the NPS should disallow the use of generators in the RV camping area. Assuming that you want visitors to learn something about Organ Pipe, the most important (and cost-effective) thing you can do is to encourage camping instead of RV's. The best interpretive center in the world can't negate the fact that electrically illuminated RVs are isolated islands of technology. Keep the campground but decrease RV sites and increase tent-only sites so that they are at least equal in number to RV sites. Also, the tent sites should be isolated from the RV sites, and given the prime spots.

Roads - I support the New Ideas Alternative (NIA), closing 19.5 miles of road. Actually, I support closing more, especially the road to Senita Basin. As it stands there is no place in Organ Pipe further than seven miles from a road. Some wilderness. The closed roads could, as suggested, be hiking trails, or mountain bike trails.

Permits - The proposed permit/tour system for Quito and Alamo should be employed only after you see what the effect of other changes are. E.g., if there's no camping at Alamo, will there be the same amount of traffic? Alternatively, you could require a permit to drive to Alamo, but none would be needed if you parked along 85 and rode your bicycle.

Sincerely,

Jim Malusa
Research Associate

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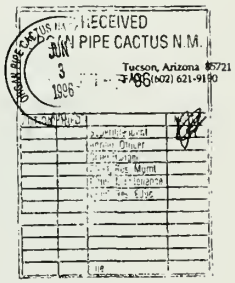
HERPETOLOGY



30 May 1996

Mr. Harold J. Smith, Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, AZ 85321

Dear Mr. Smith:

I want to commend you and your staff at Organ Pipe Cactus National Monument, especially Chief of Resources Management James Barnett, for outstanding efforts in development of the Draft General Management Plan. I am impressed by your far-sightedness and courage. The original proposal truly looked far to the future in support of resource preservation. Although aspects had to be scaled back, particularly due primarily to parochial local interests, your forthright defense of the resource was significant. It will have raised the level of thought and argument to higher ground, which is, in the long run, most important.

The new General Management Plan preferred alternative ("New Proposed Action Alternative") represents, in my opinion, a well thought-out compromise among competing or conflicting trends. My comments are limited here to immediate concerns regarding access at Quitobaquito and housing facilities for researchers (field personnel).

I suggest maximum appropriate access to Quitobaquito to ensure vigilance against introduction of non-native species and collection of natives. Maximize the number of trusted entrants to the site, as well as monument and/or research personnel vehicular access. This will increase vigilance at the wetland.

Monument-provided housing for researchers in the headquarters-residence area was a terrific boon to the several projects I have participated in on-site. Proximity to the Resource Center facility (and in the future, to the SERMC) was a significant aspect. Further, proximity of outside research personnel to resource management and other rangers was an additional important benefit, both to the research and to the interpretive process. I see little gain, and substantial loss, to isolating the researchers on private land in Lukeville. I would anticipate higher costs and a less congenial atmosphere. I encourage you to maintain on-monument researcher housing facilities. The resultant "research station" atmosphere would increase the efficacy of research and the positive impact of research on resource management.

Organ Pipe Cactus National Monument has a proven record already as a research center and leader in natural resources management, due in no small part to your efforts and those of Mr. Barnett. The General Management Plan, even after the politics of compromise, clearly reflects your lasting achievements for the monument. I appreciate the opportunity to comment.

Sincerely,

Philip C. Rosen

Philip C. Rosen

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June 12, 1996

Superintendent
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Via Fax (520) 387-6849
and First Class U.S. Mail

Re: Written Comments on *Supplement* to Draft General Management Plan, Development Concept Plans, and Environmental Impact Statement for Organ Pipe Cactus National Monument

Dear Superintendent:

On behalf of Defenders of Wildlife and its 135,000 members nationwide, including more than 2,000 members in Arizona, we submit the following comments on the *Supplement* to the Draft General Management Plan, Development Concept Plans, and Environmental Impact Statement for future management of Organ Pipe Cactus National Monument (collectively, "the plan"). As you know, a year ago, on July 10, 1995, we submitted comments on the original Draft General Management Plan, Development Concept Plans, and Environmental Impact Statement. Those comments (attached hereto and incorporated herein) should be reviewed and considered in conjunction herewith.

The plan, as supplemented, does incorporate a number of beneficial proposals, including the elimination of previously proposed developments in prime Rosy boa (*Lichanura trivirgata*) habitat and the addition of protective grates to the adit that is a nationally significant roosting site for the endangered Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*). As previously noted, we also are pleased that a network of marked trails will be established around Quitobaquito springs, to reduce trampling and other disturbance at that location.

Unfortunately, even with the new supplement, the plan remains inadequate to protect the natural resources of Organ Pipe Cactus National Monument and recover the threatened and endangered species that live within its boundaries. The plan's NEPA analysis remains deeply flawed, failing to consider a reasonable range of viable alternatives and failing to adequately analyze the direct, indirect, and cumulative impacts of each proposal made therein. With this letter, we repeat our main concerns about the plan and give notice that we may decide to bring a legal challenge against the Park Service under NEPA and the ESA, if our concerns are not timely and adequately addressed.

Important Issues Raised In Our Previous Comment Letter Remain Unaddressed

First of all, we wish to express our disappointment that, more than a year after our original comments were submitted to the Park Service, our NEPA and ESA concerns remain largely unaddressed. Although in today's letter we will not repeat the content of that previous correspondence (instead attaching a copy of it, for your review), we will remind you of our "top" concerns: (1) protection and recovery of the endangered Sonoran pronghorn, Lesser long-nosed bat, Rosy boa, Quitobaquito desert pupfish, Quitobaquito snail, Sonoran mud turtle, Underwood's mastiff bat, Cactus ferruginous pygmy owl, and twenty other rare and imperilled species occurring on the Monument; (2) need for the general management plan to direct threatened and endangered species recovery efforts on the Monument; (3) need to remedy the problems currently being caused by Highway 85; (4) need to provide adequate cumulative impacts analysis, regarding imperilled species; (5) need to provide adequate baseline data regarding current visitation levels and environmental impacts therefrom, as well as projections for the future; (6) need to address the problems of herbicide and pesticide drift, invasion of non-native flora and fauna, impacts from military overflights, and severe groundwater depletion in Mexico's Sonoyta Valley (causing groundwater drain below the Monument, including Quitobaquito springs, which is designated as critical habitat for the pupfish); (7) need to provide evidence of adequate ESA section 7 consultation; and (8) need to offer a reasonable range of alternatives, including an alternative of *decreasing* the level of visitation to certain areas of the Monument. These concerns remain unaddressed. We will now revisit and elaborate upon our concerns, in the context of the new supplement.

Alamo Canyon Campground Expansion

Generally speaking, in the supplement, two "new" alternatives are discussed: the New Proposed Action Alternative (hereinafter identified as the "new proposed action") and the New Ideas Alternative (hereinafter identified as the "non-selected new ideas"). With respect to Alamo Canyon Campground, specifically, the new proposed action consists of four new drive-in campsites, plus a day-use parking area for six additional vehicles. The non-selected new ideas alternative would close the Alamo Canyon area to overnight use, to benefit the Lesser long-nosed bat and Cactus ferruginous pygmy owl, but not restrict or regulate day use. We oppose the addition of new campsites to the Alamo Canyon Campground. We disagree with the supplement's conclusion that the expansion is "not expected to have an adverse effect on either the lesser-long nosed bat or cactus ferruginous pygmy owl." S-85. The supplement sets forth no reasonable basis for this conclusion. The only statements made in support of this conclusion, with respect to the bat, are that (a) visitation to the Monument currently is "relatively low" during the roosting season, (b) grates will be placed at the adit opening, to prohibit human entry, and (c) the adit is "nondescript" and in a "remote" location, so that "all but the most determined hikers" would be discouraged from visiting the sensitive roost site. S-84.

This line of reasoning is unsupported by data and is unpersuasive on its face. Bats may still be impacted during the non-roosting season; grates built over the adit cannot prevent all significant negative impacts from human visitation; and the adit is not as remote as the plan suggests, since visitors have disturbed it in the past. (The original plan concedes at page 111 that mine adits "are attractive destinations for hikers.") In other words, the supplement provides no reasonable basis for its assertion of "no adverse effect" to the bat. It is known that these highly endangered bats react negatively to human disturbance and that they previously have been disturbed by visitors hiking to this particular adit from this particular campground (though neither the plan nor the supplement provide any data or analysis whatsoever regarding the frequency or intensity of previous disturbances to the adit and the impacts those previous disturbances have bad upon the bats therein). Disturbances may occur through human entry into the adit or simply through noise (hikers yelling into the adit for an echo) as well as noise, campfire, or artificial lighting in the campground, after dark, (with visitors camping in the bat's nighttime range). These impacts to the bat have not been adequately analyzed in the plan, despite the proposed increase in human visitation to the area, which will likely make them worse. S-84. Even basic, preliminary baseline information on current campground usage -- and current identifiable impacts to the bats therefrom -- is absent from the supplement. The Park Service cannot reasonably conclude that there will be no adverse impact from increased human presence at this location when it does not have (or has not set forth for public review) basic baseline data and scientific analyses concerning current impacts to the bats based on the current levels of daytime and nighttime visitation. Nor can the agency reasonably select the new proposed action over the "new ideas" alternative (which would close the campground to overnight use) when the plan provides no comparative analysis enabling the reader to compare the impacts of nighttime closure (per the new ideas alternative) versus the impacts of allowing (and even expanding) overnight use (per the new proposed action).

Given the fact that the proposed campground expansion "could result in the presence of twice as many campers in the area at dawn and dusk," S-84, it is incumbent upon the Park Service to do a more thorough analysis of the potential adverse impacts to nighttime species such as the endangered bat and owl. To make a well-reasoned decision, the Park Service needs to study the relative importance of the Alamo Campground location to these species, on a cumulative, range-wide basis, taking note that for each of these species, the historic range has been severely depleted, making all remaining viable habitat even more important to their survival and recovery. Questions that need to be asked and answered include: how important is this adit and the foragaging area that surrounds it to the survival and recovery of this species, range-wide? Is this adit a source of dispersing bats for other areas? This is the largest known maternity colony in the United States. It merits protection! What impacts might there be from additional human beings visiting the adit (even if the grates prevent them from physically entering the adit)? What if hikers shout into the adit, to get an echo? What if they bring a radio to the site? What if they throw rocks through the grates? Or trash? Or cigarettes? Can the Park Service assure these bats will remain unmolested?

In addition, what impacts might there be from additional human beings camping within the nighttime foraging range of the bats? Will vegetation the bats depend upon be degraded by the visitors? Will campfires or visitor noise cause the bats to avoid essential areas they need? Will there be an increased risk of fire? Or litter? Or air pollution? Or noise pollution? Or predators that impact the bat or its food source? Is there any available data on human disturbance impacts to other Lesser long-nosed bat colonies in the Southwest? Or bat colonies in general? Are there other areas of the Monument where the campground or trail could be re-located without such a severe potential impact on an endangered species? And why is the Park Service proposing four new campsites? Why not fourteen? Or forty? Or one? Or none? Is there a perceptible difference in the likely impacts to the bat, depending on the number of human visitors? What vegetation is likely to be impacted by the increased human presence, and to what extent do the bats utilize that vegetation? What Lesser-long nosed bat experts and general bat biologists have been consulted, for the purpose of this NEPA and ESA process, and what have they said about this campground expansion? The plan fails to include any such data or scientific analyses.

The same problem exists with respect to the Cactus ferruginous pygmy owl around the Alamo Canyon site. There is no reasonable basis for concluding that the proposed campground expansion "is not expected to have an adverse effect on the [owl] or its critical habitat." S-84. The plan provides no analytical support for this assertion. Such support is necessary, given the fact that "campground expansion could result in the presence of twice as many campers in the area at dawn and dusk, periods when this owl is actively foraging." S-84. The same questions posed for the bat, above, apply to the pygmy owl. How important is this location for its survival and recovery? (The fact that the bird has not been seen near the campground in the past few years means little. The owl may be present but undetected. The plan does not reveal what surveys, if any, have been conducted by the Park Service to locate this owl near the campground. The area does contain viable habitat for the species. The ESA mandates endangered species recovery. All federal agencies have a duty to take action to recover listed species. See ESA section 7(a)(1). Recovery often requires an endangered species to re-occupy historic habitat that is not presently occupied. This often requires human disturbance in or degradation of the habitat to be remedied, so the species may re-establish itself or be reintroduced. The area at the Alamo Canyon Campground is viable recovery habitat for the owl. Parts of it have been proposed as critical habitat. Thus, the location is important and studies need to be conducted before human visitation can be increased. We wonder whether recognized Cactus ferruginous pygmy owl experts (or owl experts in general) have been consulted, regarding the proposed campground expansion, and what they have to say about it. Are there pygmy owl studies, conducted elsewhere in the Southwest, that might shed light on the issue of human disturbance? And will the presence of additional visitors during the night (or during the day, as hikers) harm the owl? We believe that the proposed plan causes jeopardy to both the owl and the long-nosed bat, adversely affecting their chances for recovery.

It is insufficient for the Park Service to promise that, in the future, it will "expand its monitoring program as well as collect data on the demographics, behavior, and habitat requirements of [the owl]" to enable the agency to gain "a better understanding of the species' tolerance of humans" and "help determine the appropriateness of campground expansion." S-85. Such studies and analyses should be performed now, prior to campground expansion. NEPA requires that agencies study all foreseeable impacts before they take action, not after. Until studies are undertaken which show that campground expansion is consistent with recovery for both the bat and owl, we must oppose any expansion of the Alamo Canyon Campground and, conversely, advocate for the restriction of current visitation to the subject area. This is true for both daytime and nighttime visitation, as currently exercised within that part of the Monument. We also believe that this analysis must be incorporated as part of a programmatic NEPA document, covering all locations on the Monument where the owls may occur, such as the general plan, rather than a site-specific document, drafted later on, out of context. The public should have an opportunity to comment on the campground expansion, while it is considering the programmatic "big picture" of management at the Monument, with solid scientific data concerning the owl (as well as the bat) and should see the results of the applicable section 7 consultation, which is to be based on "the best available science," see ESA section 7(a)(2), before the campground and day use facilities are expanded.

Finally, also in the context of the Alamo Canyon area, we are disappointed by the lack of a reasonable range of proposed alternatives. The Park Service has proposed no alternative which would remove the existing campsites or restrict existing activities at and around the subject area. The only alternatives presented consist of "no action" (allowing the current daytime and nighttime activities to continue in the area), the proposed action (creating four new campsites and a large day-use parking area), and the non-selected "new ideas" alternative (closing the campground to overnight use, but still permitting continued day use of the area, while doing nothing to curtail such uses in the future).

Quitobaquito Springs, Control of Visitation

Our comments with respect to Quitobaquito are similar. We disagree with the supplement's conclusion that, for the proposed action, "no adverse effects are anticipated for the Quitobaquito desert pupfish, Quitobaquito snail, or Sonoran mud turtle despite [tbe] lack of visitor use restrictions in the Quitobaquito area." S-85. The plan provides no reasonable basis for this tenuous conclusion. We believe the aforementioned rare, endangered and imperilled species at and around Quitobaquito springs will be severely harmed by the foreseeable increase in human visitation to the Monument, under the proposed plan. The plan's analysis of likely impacts to these species is inadequate.

The plan fails to ask (let alone answer) any of the relevant questions that need to be asked, when considering potential impacts to the Quitobaquito area. First, what are the impacts now occurring to the species in that area, as a result of current levels of visitation? This is poorly described in the plan, though there are vague and general hints

that certain species are currently being adversely impacted in a major way. See, e.g., plan at pages 112-113 (stating in the "existing conditions" section that human visitation to Quitobaquito has "had an adverse effect on the Sonoran mud turtle population which is declining and may face extirpation," and that "[e]ven more dire consequences may be faced by the Quitobaquito snail and desert pupfish whose continued existence as a species and subspecies, respectively, may be jeopardized.") More detail is required, in order to make an intelligent decision regarding the impact of increased human visitation.

The public needs to know how many visitors visit the area per year, and at what seasons. What impacts have they had, to vegetation density, wildlife habitat use, ground cover, water quality, and other elements of the ecosystem? What impacts have these visitors had on nonnative species, either plant or animal? Have they caused or facilitated their spread? Is visitation implicated in the decline of the Sonoran mud turtle population at Quitobaquito, which faces extirpation? What about the local Desert tortoise population? Is it being impacted by current levels of visitation? What about all the other species of special concern that live at and around Quitobaquito, such as the Cactus ferruginous pygmy owl, Quitobaquito snail, and Underwood's mastiff bat? What about migrating neotropical birds like the endangered Southwestern Willow Flycatcher? There is almost no information in the plan concerning the present health or status of these local populations, their trend, and any declines that may reasonably be connected to particular levels of human visitation at the springs. (Again, detailed incremental visitation data must be analyzed and set forth for the public to review and consider.)

Given that kind of baseline information (which is absent from the plan), the next question that needs to be answered is what impacts might occur from a given increase in the level of visitation to Quitobaquito. Clearly, under the plan, it is envisioned that visitation to tbe Monument will increase in the coming years. It is increasing now. Will that generalized increase in visitation translate into increased visitation to Quitobaquito? This question must be answered (and the answer quantified). Will the proposed network of marked trails, and a better parking lot, attract increased visitation to the site? We believe the answer is yes, but it is the plan's responsibility to provide quantification of this increase as well as an analysis of what the impacts might be. (Again, a cumulative perspective must bc taken. The issue is not simply the impact to, say, the pygmy owl population around Quitobaquito: it is all across the endangered owl's remaining range.)

For the desert pupfish, Quitobaquito is the species' remaining range. Quitobaquito springs is the only remaining natural occurrence of thc species in the United States. To comply with the ESA, it must be protected. Recently, however, there have been documented instances of predatory exotic fish being placed into Quitobaquito springs. The plan mentions one such incident, at page 73, but there have been others. (P. Marsh and W.L. Minckley, ASU, pers. comm., 1996). Across the Southwest, exotic fish have eradicated native fish species through predation and/or simple competition. Once exotics are introduced, there is no stopping them. See Fish and Wildlife Service (FWS) Recovery Plans for Desert pupfish and Gila topminnow. Moreover, it is common

knowledge among fish experts and aquatic resource managers in the West that exotic fish are introduced into native fish habitats such as Quitobaquito springs by common everyday citizens carrying bait buckets. It is a serious problem that needs to be addressed in the context of the general management plan. The more visitors there are to Quitobaquito, the more chances that exotic fish will be released into the springs, jeopardizing the pupfish. The plan contains no method for dealing with this problem, other than recommending additional "monitoring." See plan, at page 73. Monitoring is not enough. By the time monitoring reveals that Quitobaquito springs has a problem, Quitobaquito springs will have a problem of a magnitude the Park Service cannot resolve. As the Fish and Wildlife Service and native fish experts are well aware, once exotic fish are in place, it is exceedingly difficult to selectively remove them. See all publications of *P. Marsh, W.L. Minckley,* and Fish and Wildlife Service regarding native Arizona fish species and interactions with exotics. The plan contains no method of preventing exotic fish introductions at Quitobaquito, and no analysis of the inreased risk of such introductions, due to increases in human visitation to the Monument.

The plan fails to satisfy NEPA because it contains no analysis of the potential adverse impacts of increased visitation on riparian vegetation and water resources at and around Quitobaquito. It merely asserts, without basis, that the proposed network of marked trails will benefit Quitobaquito, relative to the uncontrolled trampling of vegetation that goes on today, "[b]y encouraging visitors to remain on established trails." Supplement at S-83. While this may be true, the real issue is whether, on a net basis, *Quitobaquito will be harmed, notwithstanding the likely benefits of these proposed trails,* by the increase in overall visitation. The proposed action contains no visitor restrictions (such as a permit system with a limited number of permits, based on the carrying capacity of the location). Supplement at page S-56. The non-selected "new ideas" alternative calls for the restriction of visitor access through some kind of permit system or mandatory ranger-guided tours, though the proposal is quite vague. S-24. Although neither of these proposals goes far enough, since neither quantifies a science-based Quitobaquito springs "carrying capacity" as an upper limit on visitor use, the "new ideas" alternative is a step in the right direction. NEPA requires the Park Service to analyze the impacts of having no visitor restrictions, given the foreseeable growth in visitation, as well as the impacts of having a given, specific, quantified level (or levels) of restricted visitation to the site. Without this kind of data and analysis, neither the Park Service nor the reviewing public can intelligently select between the proposed action and the non-selected "new ideas" alternative, on the basis of relative impacts to the wildlife at Quitobaquito. Without this kind of analysis, and without additional alternatives calling for different levels of restricted access to Quitobaquito (with differential impact levels discussed) there can be no well-informed decision. It is insufficient for the Park Service to state that, at some point in the future, it may take action to determine "appropriate user capacities" for Quitobaquito and restrict visitation there. Prior to expanding visitation, as proposed in this plan, the Park Service must analyze all the likely impacts of its proposals and mitigate for significant impacts. This must come before the Park Service takes action, not after.

We also believe that with Quitobaquito springs, as with many other areas of the Monument described in the plan, the Park Service has failed to adequately describe the current state of affairs, and to describe and quantify the current level of adverse impacts occurring around Quitobaquito due to the apparently unprecendented (and increasing) level of visitation. Without baseline data comparing particular visitation levels to particular levels of environmental degradation, there can be no rational basis for making determinations of "no adverse effect" or "no significant adverse effect" in this plan. Without this data, the public cannot submit intelligent comments or choose alternatives.

The comments we submitted last year have been ignored. In those comments, we were already warning that "[i]ncreased human visitation will translate into increased environmental impact to Quitobaquito Springs. The plan does not quantify or analyze the likely degree of such impacts. NEPA requires such analysis" and suggesting that "[o]ne reasonable alternative not considered in the plan is decreasing the level of human visitation to Quitobaquito Springs, to deal with the ongoing destruction of the pupfish's critical habitat." (With respect to the proposed network of trails, we were stressing that "[t]he plan offers no analysis to determine whether [the expected] increase in human visitation will be offset by the new, marked trails at Quitobaquito. It seems likely that, on a net basis, jeopardy to the pupfish will increase.") Our comments were never addressed in the supplement. Today, we find ourselves having to raise them again.

Finally, also with respect to Quitobaquito, the supplement notes a potential new threat without any analysis of additional potential adverse impacts therefrom. It notes that a pullout has been proposed on the Mexican side of the border, along Highway 2, with a pedestrian crossing from the Mexican highway north into the Quitobaquito springs area. The supplement should provide an impact analysis for this quite foreseeable future development. We believe it would add more visitors to the location and, thus, more adverse impacts to the vulnerable riparian and aquatic habitats. (And, again, the plan should propose alternatives that restrict visitation to a proven sustainable level.)

Severe Ecological Impacts from Highway 85

Again, we find ourselves repeating the same comments we submitted a year ago. Last year, we stated: "State Route 85 is annihilating species along its entire route, including the Rosy boa. Despite this, the plan defers the analysis of options for State Route 85 to some future, unspecified date, saying there 'should' be 'a separate planning effort' at that time." We also noted that Higbway 85 seems to be preventing the endangered Sonoran pronghorn from utilizing available habitat on the eastern half of the Monument, fragmenting the Sonoran desert ecosystem into disjunct western and eastern hemisphcres. We noted that the recovery of the Sonoran pronghorn pursuant to section 7(a)(1) of the ESA requires the Park Service to engineer some kind of solution to the problem of Highway 85 within the boundaries of the Monument. We stressed that the ESA mandated such a result, for the pronghorn's recovery, and that NEPA mandated serious consideration of this (the modification of Highway 85 or the traffic use thereon)

as a management alternative. The supplement dismisses our comment without any NEPA analysis whatsoever. It reveals that the Park Service "is not proposing in any of the alternatives to re-route traffic, establish a toll road, or construct a fee-collection station at the entrance within the monument along State Route 85." It also reveals that the Park Service has dropped its previous consideration of reducing the speed limit along State Route 85 (by 10 mph). It indicates that local interests as well as the Arizona Department of Transportation vehemently opposed any speed limit reduction. In other words, as a result of local and state pressure on the Park Service, "no tolls, entrance stations, traffic re-routes, or reduction to the existing speed limit are proposed." S-21. The Park Service proposes to "work with" the Arizona Department of Transportation "to ensure continued travel and commerce along this road corridor," with the added note: "while at the same time improving resource conservation measures," whatever that means. See S-12. No alternative even touches upon any direct, immediate remedy to the problem of Highway 85, despite the admitted ecological devastation the road is causing within the Monument, see plan at page 72, and there is no analysis whatsoever of any management tool for remedying this problem within the boundaries of the National Monument. NEPA demands much more than this from a federal agency managing federal land -- no matter what the local or state political climate may be.

If the Monument has a problem with this highway (which it does) and it is writing a programmatic general management plan (which it is), then under NEPA the impacts of that highway must be considered and a reasonable range of alternatives proposed, to deal with those impacts. Moreover, where the recovery of an endangered species is involved (which it is), then solutions must be implemented to bring about that recovery. For the Park Service to issue a general management plan that envisions increased visitation to the Monument, now and in the future, causing increased traffic along Route 85 into the Monument, along with a foreseeable increase in unrelated commercial traffic along Route 85, passing to and from Mexico, through the Monument, and for the agency to postpone all discussion of Route 85 until some future, undetermined date when it might "work with" state and local entities that have other missions and agendas -- other than the sound management of federal property and the recovery of endangered species -- is the ultimate cop out. S-25. We will consider seeking judicial relief, if need be, to compel the Park Service to comply with NEPA and the ESA, in dealing with Route 85.

In this context, we add that it is incumbent upon the Park Service to explain to the general public exactly how the agency interacts with the Arizona Department of Transportation and other agencies, with respect to Route 85. The supplement barely mentions this relationship -- which is important in understanding the Park Service's decision not to take immediate action with respect to Route 85 -- stating without further detail that Arizona maintains the road "under a perpetual easement." The authority (or lack thereof) of the Park Service to compel certain kinds of changes on or along Route 85 must be explained to the public. (In addition, we need to know what, if any, NEPA and ESA section 7(a)(2) compliance has been performed by the U.S. government, with respect to the aforementioned "perpetual easement" to Arizona's highway agency.)

Also with respect to Route 85, we note that under every single alternative except the "no action" alternative, new pull outs are proposed. This is not a reasonable range of alternatives under NEPA. There also is no impact analysis concerning these pullouts In the proposed action, four new pullouts are proposed, but the natural and wildlife resources present at those four locations is nowhere described. There are no wildlife surveys, photographs, or maps of the sites, and no impact analyses concerning the pullouts and the consequent loss of habitat. NEPA requires that the public be given site-specific analyses to comment upon.

The plan further admits that under every single alternative, "[t]he impact to wilderness values from noise and visual intrusions resulting from the anticipated increase in non-monumental traffic would continue to be adverse, long-term and significant." However, the plan does not analyze, quantify, or describe exactly what these "impacts to wilderness values" will be. In fact, there is no definition of "wilderness values." There is no quantification of current traffic levels, projected future levels, average speeds, or the most important environmental element of all: the number of road-related deaths of sensitive and/or locally declining species, per year, or per relevant season, within the Monument, as a result of Highway 85. There isn't any indication that any such data even exists, regarding wildlife mortality. Without such data, there can be no rational basis for the Park Service's decision not to act immediately to solve the problem of Highway 85, given what it does already know about the highway's impacts to wildlife. See plan at page 72 and supplement at S-81. There is no basis for the Park Service's decision to drop its original proposal to lower the speed limit or for its decision to drop its proposal to re-route the highway and/or discourage commercial traffic, given what the Park Service presently knows about impacts to wildlife and pronghorn habitat utilization, as a result of Highway 85. The decision to postpone general management-level planning and analysis of options for this Highway, as part of the current NEPA document, for reasons of political expediency, is arbitrary, capricious and not in accordance with law.

With respect to Highway 85 and its specific effect upon the endangered Sonoran pronghorn, the supplement improves upon the original plan by at least mentioning the issue of pronghorn avoidance of the highway -- and the need to assure "safe passage" across the road. However, the supplement's discussion is cursory, vague, ambiguous, and highly generalized. No new alternative is proposed, to specifically deal with the problem of Highway 85, as it relates to pronghorn recovery. Again, there is a vague promise by the Park Service to "work with state and federal agencies to develop a *research program examining the effectiveness of various traditional and innovative* measures aimed at reducing wildlife mortality and facilitating safe passage across the roadway." S-81. The problem for the Park Service, under NEPA and the ESA, is that the agency is postponing its "study" of the Highway 85 problem while presently moving forward with plans to accomodate increased visitation -- visitation that will utilize that highway (as well as encroach upon habitat areas on the western side of the Monument where pronghorn occur). It is improper to postpone the Highway 85 problem, with respect to pronghorn recovery, while presently worsening conditions for the species.

Even if the status quo were maintained, and the "no actioo" alternative selected, the Park Service would still have ao affirmative duty to act upon the Highway 85 problem, since it is causing ecological problems within the Monument at this time, here and now, and precluding the recovery of the endangered pronghorn to a big part of its potential range. A more concrete discussion of potential solutions to the problem -- and a proposed course of action to be implemented by the Park Service in the immediate future, contemporaneous with the increase in human visitation to the Monument aod the increase in traffic along the highway -- is required. S-33, S-81. Because the damage is *being inflicted here and now, a remedy must be proposed, here and now.*

In this context, we note tbat the supplement references work by Ockenfels *et al.*, 1996, without mentioning that two of Ockenfel's recommendations are that underpasses or overpasses be constructed over highways in pronghorn habitat and that sucb highways be relocated outside of the species' range. The Fish and Wildlife Service Recovery Plans for the pronghorn also identify highways, iocluding Highway 85, as a barrier to recovery.

In addition, neither the plan nor the supplement provide any analysis wbatsoever of potential impacts from increased human visitation to Sonoran pronghorn recovery. Under the plan, human visitation (including hiking, camping, and driving of vehicles) will increase in viable pronghorn habitat on the Monument. It is known that pronghorn are displaced by human activities and that, to recover the species, it will be necessary to reduce the amount of disturbance occurring in its range. See Fish and Wildlife Service pronghorn recovery plans (1982 and 1994). Will increased visitation impact the species?

Impacts to Rosy boa

The plan still fails to provide an adequate impact analysis of potential impacts to the rosy boa from increased visitation to the Mooument as well as increased use of roads and highways, including Highway 85. Are any of the proposed pullouts io boa habitat? Are visitors frequenting or impacting other locations occupied by the boa? Where does the boa occur on the Monument? Will those areas receive management attention?

Impacts to the Acuna Cactus

The plan fails to provide an adequate impact analysis of poteotial impacts to the Acuna cactus. Is the Park Service monitoriog buman visitation to cactus locations?

Impacts to Quitobaquito Springs due to Aquifer Depletion

The plan totally ignores the problem of aquifer depletion below Quitobaquito springs. Again, this is critical habitat for the eodangered desert pupfish and is essential habitat for for other endangered, rare, and imperilled species such as the Cactus ferruginous pygmy owl, Southwestern willow flycatcher, Quitobaquito snail, Sonoran mud turtle, and Underwood's mastiff bat. As noted in our previous comment letter, the Park

Service has an obligation as land manager for the Monument and as a federal agency charged with recovery duties under sectioo 7(a)(1) of the ESA, to take affirmative action to resolve the severe problem of aquifer depletioo below Quitobaquito springs, by communicating with the government of Mexico on the issue of groundwater pumping in the Soooyta Valley and participating in the NAFTA or BECC environmental processes.

Exotic Species, Military Overflights, and Pesticide Drift Problems Ignored

As noted in our previous comment letter, the plan ignores the persistent problems of exotic species introduction (for both flora aod fauna), military overflights, and pesticide-herbicide drift into the Mooument from adjacent or nearby agricultural areas. No data aod no analysis has been provided of the curreot condition, with respect to these three issues, or the future foreseeable condition, or alternatives to address them. If this is truly a general management plan for the Monument, it must cover these issues.

Net Loss of Sonoran Desert Habitat

The plan is confusing and unclear with respect to analyziog exactly how many acres of Sonoran Desert habitat will be lost or otherwise disturbed by the proposed action. There will be increased visitation, there will be new trails, there will be new facilities, and there will be new campsites. Indirectly and cumulatively, there will be development in other locations of the Sonoran Desert, including the immediate vicinity of the Monument, in Yuma, Tucson, Ajo and Lukeville, as well as *in* Sonoyta, Mexico. It appears that there has been no analysis of this habitat loss, under the alternatives presented in the plan and supplement. It is unclear if the plan has considered indirect and cumulative losses of desert habitat. See, e.g., supplement at S-86. It is also unclear whether "revegetated" areas, S-86, or areas "restored to natural conditions," S-88, truly can compensate for the habitat values of the land that will be lost. Few if any details are given regarding the species and other ecosystem components of the lands that will be lost, to compare to lands that will be "revegetated" or "restored to natural conditions." Will any particular species end up losing habitat, on a net basis, that they prefer?

Erosion

The plan inadequately analyzes potential increases in surface erosion resulting from the increased human visitation to the Monument. The analysis is cursory and not site-specific. As previously noted, new trails and campgrounds will increase erosion.

Water use

The proposed action states that it is expected that the construction of additional housing and facilities at both Lukeville and Why will result in increased water consumption, although not in any statistically significant amount. We believe that this increase may in fact be significant and urge the Park Service to provide the public with

the data supporting its conclusion -- as well as a detailed agenda of the water conservation measures it intends to develop and implement. It is insufficient for the Park Service to say, without basis, that "there would only be a slight to moderate increase in water consumption over existing levels ... [f]ollowing implementation of conservation measures," when those measures have not been specified or submitted for public review. S-80. Moreover, it is again unclear whether the plan considers indirect and cumulative water use in the Sonoran Desert including areas in the immediate vicinity of the Monument such as Ajo, Why, Lukeville, and Sonoyta, Mexico. With *NAFTA and with the increase in facilities at the Monument (and with the Monument* changing from a monument to a national park with more prestige), cumulative water use in the Monument and in areas around it is sure to increase. This must be quantified.

Visitation Data and Predictions of Future

The plan does not adequately present and analyze current visitation data for the Monument (and for particular locations therein) nor does it project future visitation data and analyze the environmental impacts thereof. Moreover, where the plan does mention such information, it is contradictory. For instance, regarding visitation at Quitobaquito, the plan says the "new ideas" alternative with its restricted visitation (via permits and/or mandatory guided tours) would cause visitation to decrease because of these restrictions are inconvenient for many visitors, but then it states that visitor use would be no diffcrent at Quitobaquito under the proposed action -- which imposes no such restrictions on visitors. S-90, S-92, and S-93. This is illogical. Moreover, the plan provides no information showing raw data (on current and projected visitation to the Monument and Quitobaquito in particular), methodology, assumptions, and calucations. There is no way to analyze impacts and select between alternatives without such data. Because no data is analyzed or presented, there can be no rational basis for the statement that "[d]espite an anticipated increase in visitation, visitor use is not expected to cause adverse impacts on wildlife or its habitat." See supplement at S-85.

Cumulative Impacts Analysis

As we stated in our previous comment letter, the cumulative impacts analysis is terribly inadequate. For each potentially affected species, the Park Service must analyze not only the threats posed by visitation and other activities at the Monument, but also *the threats posed by other factors, range-wide. On a cumulative basis, a small impact* on the Monument may prove to be the straw that breaks the camel's back. The cumulative impacts analysis is cursory, totalling little more than two pages in length, for the proposed action. See plan at pages 123-126, supplement at S-96. There is no discussion of any cumulative adverse impact to the riparian and aquatic species found at and around Quitobaquito springs (such as the endangered pupfish) due to increased levels of human visitation, and no such cumulative discussion with respect to other endangered and declining species such as the Sonoran pronghorn, Cactus ferruginous pygmy owl,

Lesser long-nosed bat, Rosy boa, and Sonoran desert tortoise. We believe the proposed management plan for the Monument will have significant impacts, on a cumulative level, for these species. For instance, the failure to remedy the problem of Highway 85 will significantly impact protection and recovery of the pronghorn, rosy boa, and desert tortoise. The failure to control visitation levels at Quitobaquito will significantly impact the species that are found there, including the desert pupfish. The failure to reduce visitation levels at and around the Alamo Canyon Campground will have cumulatively significant impacts to the Lesser long-nosed bat and the pygmy owl.

To satisfy NEPA, the plan must review and consider impacts to these species that are occurring range-wide, beyond the boundaries of the Monument. For the pronghorn, for instance, there is data from the Arizona Game and Fish Department (J. Hervert) showing that mortality rates are incredibly high, perhaps due to the current longstanding drought or due to possibly elevated levels of predation; showing that pronghorn numbers may be as low as 100 in the United States; that some pronghorn may be at significant risk of harm or harassment by the Air Force and Marine Corps on the Goldwater Range and even on Cabeza Prieta National Wildlife Refuge; and showing that roads such as Highways 8, 85, and 2 are preventing pronghorn passage. There are numerous proposed federal agency projects going on in the Sonoran desert that may affect pronghorn recovery, such as the Marine Corps' proposed changes in training based in Yuma, over Goldwater and Cabeza; the FAA and Air Force's proposed construction of a radar facility atop Childs Mountain on Cabeza; the BLM's grazing of cattle in current and former pronghorn habitat; the BLM's management plan for Lechuiguilla-Mohawk; the Fish and Wildlife Service's management plan for Cabeza, which will likely result in an increase in visitation levels to the refuge; the Air Force's expansion of its measurement and debriefing system on Goldwater; the Marine Corps' expansion of its TACTS facilities on Goldwater; the Air National Guard's proposed expansion of of its helicopter training based in Marana, with operations over Goldwater and the Sonoran desert; the Air Force's bombing of H.E. Hill on the South Tactical Range of Goldwater, in known occupied pronghorn habitat; and the Arizona Game and Fish Department's collaring of pronghorn that has resulted in numerous instances of capture myopethy and/or death, as well as its development of water resources on Goldwater and Cabeza, possibly increasing predation. Other cumulative threats to this species may be a new road project proposed near Yuma and San Luis, increasing the fragmentation of the pronghorn's historic range, and increasing development in the border region, including Ajo, Why, Lukeville, and Sonoyta in Mexico. Ongoing cumulative problems include the impact of roads such as Highways 8, 85, and 2; the impact of agricultural development such as the Wellton-Mohawk Irrigation District whicb has displaced the pronghorn from that location (and also channelized the Gila River which historically was important to the species); and military overflights and other training activities on and above the Goldwater Range. For all the other sensitive species of the Monument, such as the Lesser long-nosed bat and Cactus ferruginous pygmy owl, similar threats exist across the Sonoran desert, and these need to be disclosed to the public, for an adequate cumulative impacts analyssis.

In this regard, we also wish to disagree with the assertion that "[o]n a regional level, actions contained in the proposal would result in a negligible loss of additional wildlife habitat since all development is planned for locations where human intrusions presently exist, areas that are already of marginal value as wildlife habitat." Plan at 124. This is incorrect for many of the areas on the Monument that are being proposed for human use. There must be a closer analysis than this. It certainly is incorrect for such high value wildlife habitat areas as the Alamo Canyon site and Quitobaquito springs.

Impacts of New Trails

There is an inadequate range of alternatives regarding trails on the Monument. No alternative recommends reducing the number of trails. Moreover, all three action alternatives propose a significant increase in new trails. The proposed action seeks 8 new trails (8.9 miles). The non-selected new ideas alternative also seeks 8 new trails (10.1 miles) with four new hiking routes (37 miles). The former action alternative sought 9 new trails (9.9 miles) and two new hiking routes (11.5 miles). See S-34, S-61. The impact analysis for these proposed trails is cursory and inadquate. See S-87, S-88. Moreover, there is no impact analysis regarding the impacts of these trails on wildlife. The plan vaguely mentions "seasonal or short-term closures" of trails, to protect wildlife, "whenever necessary," see S-86, but there is no detail and no impact analysis. Statements to the effect that most trail use is "infrequent and low-level" are not illuminating.

Wilderness Designation

The proposed action recommends far fewer acres as wilderness than the non selected new ideas alternative (1,509 acres versus 3,650). We support the latter.

Twin Peaks

The proposed action recommends building facilities at Twin Peaks, whereas the non selected new ideas alternatives would restore Twin Peaks as an undeveloped area. We support the latter.

Impact to Endangered Species Recovery Options

As mentioned above, the ESA requires that federal agencies such as the Park Service do more *than just avoid causing "jeopardy" to listed species under section 7(a)(2)* of the ESA. The law requires these agencies to take affirmative steps to recover the species from the brink of extinction, so they may be de-listed. See ESA section 7(a)(1). NEPA requires an analysis of all foreseeable impacts to the environment, from a given course of action. One such impact (requiring quantification and analysis under NEPA) is the curtailment of, or adverse effect to, an endangered species' recovery options. Will the proposed action impact our nation's ability to recover a given endangered species? Will the action constrict our recovery options for the species, on a range-wide basis?

Nowhere in the plan or supplement are impacts to recovery options analyzed. This is true for the endangered Sonoran pronghorn, whose recovery could benefit by decreasing or restricting human visitation to parts of the Monument and by removing the obstacle presented in the form of Highway 85. This is true for the Cactus ferruginous pygmy owl, whose recovery could benefit from decreasing or restricting human visitation to certain areas of the Monument, including the Alamo Canyon campground area/wash and Quitobaquito springs, so the species could re-establish itself in such locations. This is true for the Lesser long-nosed bat, whose recovery could benefit by ensuring that human disturbance will not occur to the roosting site by the Alamo Canyon campground and within its nighttime range around that site. This is true for the Desert pupfish, Quitobaquito snail, and Sonoran mud turtle, whose recovery would benefit by proactive restrictions on human visitation to the Quitobaquito area. And it is true for the Rosy boa and other declining reptiles on the Monument, whose recovery would benefit by the proactive management of Highway 85. See S-82 to S-84.

Furthermore, the supplement mischaracterizes our July 10, 1995 comment letter, by saying: "A suggestion for the general management plan to also serve the role of a *Threatened and Endangered Species Recovery Plan* was rejected [by the Park Service] as being beyond the scope and intent of the General Management Plan. A General Management Plan is intended to direct future management, not serve as the vehicle for detailed implementation plans such as a recovery plan. The General Management Plan can, however, identify the need for development of such a recovery plan." S-11.

We never suggested that the general management plan become a recovery plan in the formal sense of the legal term "recovery plan" under section 4 of the ESA. Indeed, under the ESA, it is the Fish and Wildlife Service rather than the Park Service which develops recovery plans. Such plans are range-wide, not limited to one federal property. What we suggested in our comment letter, and what we continue to suggest today, is that the Park Service must manage the Monument with threatened and endangered species recovery issues in mind. This is required by section 7(a)(1) of the ESA. Furthermore, we insist that impacts to range-wide recovery options for these listed species be considered by the Park Service, and revealed to the public pursuant to NEPA.

If the Park Service is managing the Monument, and will continue to manage the Monument, under conditions that are relevant to endangered species recovery (such as conditions of increasing human visitation to the Monument, and increasing human use of Highway 85), then these are important management issues that the Park Service's general management plan must address. Endangered species recovery issues must be part and parcel of the management plan for Organ Pipe Cactus National Monument. As the supplement says, the management plan "is intended to direct future management." S-13. There is no way that future management can possibly comply with NEPA and ESA section 7(a)(1) if it fails to consider (and ultimately fails to recover) threatened and endangered species that occur within the Monument's boundaries. Future management of these species and their habitats needs to be guided by the general management plan

for the simple reason that it is that very same plan which will facilitate a tremendous increase in human visitation to the very locations (such as Quitobaquito springs) where these endangered species are found. Increasing the levels of visitation to tbe Monument, without planning concurrently for endangered species recovery efforts, will ensure that the damage is done first, while the thinking and planning is done later. Both NEPA and the ESA require more than that.

It is insufficient for the Park Service to vaguely assure the public that it will "implement activities outlined in the recovery plan[s] under the lead of the Fish and Wildlife Service." S-82. To be sure, implementation of recovery plans, when and where they exist, is advisahle and indeed required by the ESA. But recovery efforts by the Park Service pursuant to section 7(a)(*1*) cannot stop there. The Park Service must use every opportunity it can to recover listed species within the Monument, whether it considers itself to be following a Fisb and Wildlife Service recovery plan or not.

Moreover, it is apparent that the available and relevant recovery plans do call for agencies such as the Park Service to take proactive actions to help recover these species. For instance, the pronghorn recovery plan (1994) notes: "[i]ncreased use of highways could be a deterrent to expanding pronghorn populations." It specifies: "Highway 85 receives heavy traffic each year ... Long-time Ajo residents reported seeing more Sonoran pronghorn near Ajo and south in the Valley of the Ajo in past years. Observatioos of prongborns were supposedly not uncommon along Highway 85." See *1994 Pronghorn Recovery Plan at 12. One of the main recommendations* of the plan is the modification of highways so that pronghorn may gain access across them. Id., at 29. With respect to the impact of human visitation, in the form of recreational use of certain trails, roads, and campgrounds at Organ Pipe, the issue is disturbance of the pronghorn. One of the main recommendations of the pronghorn recovery plan is that federal agencies "[m]ioimize human disturbance," id., at 26, including disturbance from "recreational usage." Id., at 29. (The 1982 recovery plan said the same, at pages 9 and 14.) The 1994 plan makes clear that, in order for this species to recover, it will have to re-occupy more of its historic range and/or increase its utilization of its current range. At 30. Thus, the pronghorn recovery plan strongly supports our position that the Highway 85 and increased Monument visitation problems must be addressed in and remedied through the Park Service's general management plan. The plan cannot simply ignore or postpone the consideration of the immediate needs of the Sonoran pronghorn.

The same is true of the other relevant species that have recovery plans, such as the Desert pupfish and Lesser long-nosed bat. The recovery plans for these two species fully support our position that the increased human visitation problem must be dealt with in the Park Service's general management plan, if these species are to be protected.

The Lesser long-nosed bat recovery plan, for instance, reinforces our warning that "[w]hatever its roosting location, [the species] appears to be sensitive to human disturbance. [Data] indicate that a single brief visit is sufficient to cause a high

proportion of lesser long-nosed bats to temporarily abandon their day roost and move to another." Draft Fish and Wildlife Service recovery plan (1993) at 3. The importance of the bat's nighttime range, in and around areas such as the Alamo Canyon Campground, is highlighted: "An extremely important feature of the population ecology of the lesser long-nosed bat is its mobility. Many individuals ... fly long distances from their day roosts to forage each night ... Efficient flight profoundly influences the roosting strategy of this bat. Because they can fly long distances at low energy costs, the lesser long-nosed bat can afford to roost long distances from good feeding areas." Id., at 13-14. The plan stresses the importance of the Organ Pipe Cactus National Monument roosting site, stating that the Monument is considered "protected" federal land that is more readily managed than private property for endangered species recovery. Id., at 19. The plan sets as its "most important goal for continued survival of the lesser long-nosed bat" the "protection of major roost sites and food plants," id., at 21, and stresses that "[a]gencies sbould develop management plans for known roosts that provide restrictions or closures during times when the bats are normally present" and "develop long-term strategies to maintain the health of columnar cactus and agave populations on their lands." Id., at 22.

Similarly, the Desert pupfish recovery plan supports our position that the proposed general management plan needs to become the vehicle for Park Service recovery efforts within the Monument. One of the main objectives of tbe pupfish recovery plan is to maintain the extremely important Quitobaquito springs population in healthy status by protecting it from human-caused impacts, particularly the introductioo of exotic fish. Plan (1993), at 16-17 and 21. The plan states: "Impacts of activities such as ... recreation ... must also be determined for each pupfish habitat. Appropriate management plans must be formulated for each site ... and implemented to reduce or eliminate impacts so populations are secure. Populations will be considered secure only when the plan is in force and being implemented properly ... Unless information becomes available to the contrary, desert pupfish populations cannot be considered secure in habitats occupied by non-native fishes ... Securing desert pupfish populations also requires protecting the habitat against contamination/re-contamination by non-native fishes. Such assurance must bc accomplished on a case-by-case basis, depending upon the specific characteristics of each habitat. Provisions might include ... imposition of regulations locally prohibiting possession of non-native fishes." Id. Recreation and trampling (caused either by human disturbance or by cattle grazing within riparian areas) are identified in the plan as one of the main threats to the species. Id., at 11, 14. Given the current increase in visitation at Quitobaquito springs (and foreseeable future increases in visitation, under this general management plan, the Park Service has a duty to address threats to the pupfish, at this particular site, as part of the management plan.

Moreover, many species listed under the ESA, occurring within the boundaries of the Monument, do not have recovery plans. These include the Cactus ferruginous pygmy owl and Southwestern willow flycatcher. This does not mean the Park Service doesn't have a legal duty to take steps to recover them, under ESA section 7(a)(1). It does -- and its vehicle for satisfying that duty is its management of the Monument.

We are disturbed by the data (not elaborate upon in the plan, for public review) indicating that, under current conditions of human visitation, numerous species are declining rapidly within the Monument. The plan states, without detail, at pp. 112-113 (and on the inside cover of the original plan) that many imperilled species at and around Quitobaquito springs are decliniog -- and that even the pupfish may be in jeopardy -- under the current conditions. If this is true (and under NEPA we need to be provided with the rclevant data, to determine if it is true), then it only underscores the need to address endangered species and wildlife issues on the Monument without further delay, and the general mar agement plan is the proper vehicle.

Moreover, there is a need to assess the impacts of current and projected future visitation levels (and traffic levels oo Highway 85) on candidate species and other species that may be declining on the Monument as well as elsewhere in the Sonoran desert. If the Park Service chooses not to incorporate tbe needs of such species in its general management plan, then there may be an economic impact, in the future, on communities in the Southwest, particularly in Arizona, if those species require listing under the ESA. If the Park Service could protect these species, here and now, on federal property, so that they need not be listed under the ESA, range-wide, and the agency is deciding not to do that (while witnessing and even assisting an increase in human visitatioo to the Monumeot, likely impacting the habitat of those species), then those candidates may eod up having to be listed under the ESA, range-wide, and, therefore, the economic impacts of such a listing on communities located elsewhere in Arizona should be analyzed by the Park Service since, at this juncture, with the species unlisted, they may be avoidable.

Front-Ending Imposition of Impacts, While Back-Ending The Impact Analysis Process

We must note that in several locations within the supplement, the Park Service indicates that, at some point in the future, it will deal with some of the concerns we are raising. See, e.g., S-15, 17, 19, 20, 21, 24, 25, 27, 31, 33, 40, 43, 56, 57, 63, and especially the mitigation vaguely listed at S-112. While we are pleased that these issues apparently will be addressed by the Park Service, at some point in the future, we believe they ought to be addressed bere and now because the environmental impacts of this general management plan (which is going to facilitate an increase in visitation to the Monument and an increase in traffic on Route 85) are going to be felt here aod now. Before this plan can be considcred adequate, it must address these issues, analyze the many relevant impacts, and propose a reasonable range of alternatives for the public.

Methodology

We could find no section on methodology. A methodology section should be included to identify assumptions made, define terms used, identify sources of data and models utilized, explain how analyses were conducted, and identify significance criteria for determining when a change in baseline variables is considered "significaot" so that the analysis may be replicated by the public, in reviewing the plan pursuant to NEPA.

Comments of the EPA

Through a Freedom of Information Act request to the Fish and Wildlife Service, we have obtained a letter dated July 10, 1995 from Deanna Weiman, the Director of the Office of External Affairs of the U.S. Environmental Protection Agency, Region IX, concerning the original plan (before the supplement was developed).

Attached to that three page cover letter from Deanne Weiman were seven pages of more detailed comments from the EPA. We presume that you have copies of these documents but, if you do not, we ask you to contact us, so we may give you our copies.

We believe the July 10, 1995 comment letter of the EPA applies not only to the original plan but also to the supplement -- because we do not believe the supplement adequately removed any of the problems raised in the EPA's letter. We agree with the commeots of the EPA and thus incorporate them by reference into our own comments.

We particularly wish to stress the following statements made by the EPA: "We suggest that the [Park Service] examine an alternative that evaluates minimizing use of the Monument and the sensitive areas withio the Monument. There are concerns identified in the DEIS such as unrestricted and unguided visitation, in the Quitobaquito area particularly ... We recommend that [data be provided to] provide a snapshot of current conditions of the Monument and the areas that are experiencing overutilization ... We are concerned that [Quitobaquito with a new trail system in place] may become a magnet for visitors that in the past normally would oot have visited that area ... We recommend that the [Park Service] conduct a separate carrying capacity analysis of the area ... [T]here is no significant discussion of the potential impacts from implementation of tbe alternatives to these threatened and endangered species [citing Quitobaquito and the Alamo Canyon Campground as specific problematic examples]."

We appreciate this second opportunity to comment. If you have any questions or comments regarding the above points, please do not hesitate to contact us.

Very truly yours,

Gregory J. Sater, Esq.
Wildlife Counsel

cc: Dennis Hosack, Ph.D.
Tom Hale, Ph.D.

The Economic & Environment Association
P. O. Box P. Eskeville, Arizona 85311
602.257-0887

June 22, 1996

Secretary of Interior
Bruce Babbitt
U.S. Department of Interior
1849 C Street, N.W.
Washington, D.C. 20240

Dear Mr. Babbitt:

As an Arizona resident I'm sure you are familiar with Organ Pipe Cactus National Monument (a Wilderness Area). I feel that it is a sin for one man to waste the taxpayers dollars to build a Monument for himself so he leaves something behind when he retires.

This man has no feelings for his neighbors, for the public, the small business, especially the Environment, and the taxpayers dollars. The *public has spoken out many times in the past years* and still nothing happens, WHY? It is a shame that hard working citizens must go to the expense of filing a lawsuit against the National Park Service in order to get *the attention of the Bureaucrats who are involved* and make what is happening public information.

Suggest you read the enclosure.

Sincerely,

A.E. Gay
Economic & Environmental Association

cc. The President of the United States, William Clinton

cc. U.S. Senator, John McCain

cc. U.S. Senator, Jon Kyl

cc. John King, National Park Service Director

cc. *Many others*

Response from: The Traditional O'Odham Leaders of the Traditional O'Odham in Mexico
To: The New Proposed Action Alternative of the National Park Service

We, the Traditional O'Odham Leaders (T.O.L.) of the Traditional O'Odham in Mexico (O.I.M.), wish, at this time, to respond to the New Proposed Action Alternative of the National Park Service. For more than five hundred yeare, the Indigenoue Peoplee of these continents have been forced by genocidal policies to comply with an imposed foreign time table, affecting everything from daily family decisione to the autonomy and sovereignty of the Nations. The T.O.L. does not recognize the uninvited, imaginary line, known as the International Boundary between Mexico and the United States. Therefore, as the only tribally recognized Tohono O'Odham legal and political presence in Mexico, we wish to state that the Organ Pipe National Monument is a part of our aboriginal lands. Once again, a time table not of our own making, has been set for us, and we now respond to an organization which, through the yeare, has only paid lip service to the Tohono O'Odham. Our concerns are hereby set forth for the people seven generations in the future.

The baeie of this responee can be found in the seven points listed under the heading of Native American Consultations on page S-20 of the Supplement to the Draft.

1. Establishment of inetitutionalized mechanisms for regular consultations.

   An estabiiehed institutional mechanism is not part of our Himdak (life-way). Therefore, consultations will be available based on traditional practices and according to our time table.

2. Incorporation of Tohono O'Odham individuals into park programs.

   We turn our gaze southward and find one O'Odham employee at the El Pinacate Bio-Sphere. Therefore, we demand O'Odham hiring preference and O'Odham representation in all park programs, from management to labor.

3. Identification and study of sacred sites and traditional use areas on National Park Service lands, for better protection and vieitor avoidance.

   We do not believe that the policy of identification and study of sacred sites and traditional use areas will result in better protection and visitor avoidance. We reserve the right to identify or not identify sacred sites and traditional use areas, and we will determine policies for protection and

visitor avoidance.

4. Sharing of traditional, indigenous knowledge for National Park Service use in managing natural and cultural resources.

   The National Park Service will not manage our cultural resources and O'Odham traditional, indigenous knowledge. Information will be made available on the baeie of what non-O'Odham peoples are ready to understand, as dissemination of this information will be determined by the O'Odham.

5. Establishment of procedures for sharing National Park Service findings from scientific research projects.

   Procedures must be established that guarantee that all of the National Park Service Research findings become the property of the O'Odham.

6. Appropriate means of interpreting Tohono O'Odham history, culture and language to visitors.

   Interpretation of Tohono O'Odham history, culture and language will be controlled and conducted by the O'Odham.

7. Creation of an avenue of input from the Tohono O'Odham Nation on trail or other facility locations.

   Qualified O'Odham interpretive personnel will be on sight at all public facility locations. Trail signs and other informational documents at informational areas will be written in O'Odham by the O'Odham.

To continue, for the people who walk on the prayer made today, yesterday and tomorrow, we wish to express the following:

1. All signs shall be written first in the O'Odham language, followed by Spanish, English, etc.

2. The Traditional O'Odham will have the right of firet refusal and final say on all information disseminated by the National Park Service concerning the O'Odham Himdak (life-way). The use of western disciplines, such as ethno-archeology, anthropology, archaeology, archeoastronomy, astronomy, biology, botany, ecology, ethnobotany, ethnography, ethnohistory, epigraphy, etc., to explain the O'Odham Himdak will be used only when thorough consultations have been conducted with the Traditional O'Odham, and their approval obtained.

3. The O'Odham will have free, uninhibited accees to all areas of the Monument at all times, day and night.

To continue, we wish to ask the following questions:

1. Will National Park Service policies affect O'Odham social and/or eacred activities?

2. Will the National Park Service affect traditional activities such as:
   a. prayere,
   b. gathering of medicine,
   c. hunting of animals,
   d. harvesting of fish,
   e. solitary fasting,
   f. meditation, and/or
   g. other tribal ceremoniee,

   thereby causing:
   a. misdirection of prayer,
   b. misdirection of power,
   c. need to recreate eacred ceremoniee,
   d. degradation of O'Odham tradition and eovereignty?

3. Will the presence of the National Park Service impact cultural landscapes as defined in the following four categories:
   a. Historic, deeigned landscape,
   b. Historic, venicular landscape,
   c. Historic sites, and/or
   d. *Ethnographic landscape*?

4. Will the National Park Service impact upon Holy Land, defined as:
   a. Ecological landscape, and
   b. Story landscape?

5. How will the National Park Service comply with the Native American Graves Protection and Repatriation Act (NAGPRA)?

We thank you in advance for your Considerations. These issues are of grave concern, to us a park, bio-sphere, monument etc. is a foreign understanding. To us, when a species is gone it leaves a hole in the warp and weft of the weave of our sacred life-way, our culture.

Cordially yours,

Bruce E. Black

BRUCE E. BLACK

2032 W. Calle Placida
Tucson, AZ 85745
May 29, 1996

Patricia Clapp
Dept of the Interior
Denver Service Center
Box 25287
Denver, CO 80205

Dear Madam:

We believe the Organ Pipe Wilderness area to be a beautiful place exactly as it is today --- a nature experience with almost no encroachment by "citified improvements." Why endanger such an excellent nature experience by creating another congested Grand Canyon with all of its attendant problems? Redesigneting the area as a National Park will forever damage its pristine desert experience. We do not want this to happen and wish to voice our disappointment that our government employees are quietly undermining the peoples' desires for the area to remain as it is and exactly as was originally intended.

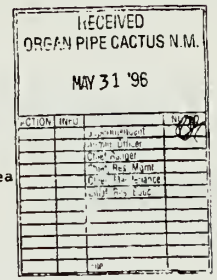
We'd appreciate your support of said desires

Sincerely,

John Bellingham

Betty Bellingham

Betty and John Bellingham



May 19, 1996

Organ Pipe Wilderness Area
Route 1, Box 100
Ajo, AZ 85321

I've been a resident of Arizona for over 40 years and have, since my early years thoroughly enjoyed the are where the Organ Pipe National Monument is now located.

When this gorgeous desert was declared a wilderness area, I fully supported the dedication. Now the Department of Interior wants to change this region into a highly funded National Park. I must say "NO" to this. This particular piece of desert is quite remote and will never draw the tourists sufficiently to justify the expense of a National park. The money could very smartly be appropriated to other Interior Department causes.

I encourage you to "PLEASE" drop the effort to expand this beautiful wilderness area into a National Park.

Sincerely,

Douglas Cole
[redacted]

Gabrielle David
[redacted]

Tuesday, April 23, 1996

Harold Smith, Superintendent
Organ Pipe Cactus National Monument
Route 1, Box 100
Ajo, AZ 85321

It is my belief that Organ Pipe Cactus National Monument is important to Western Pima County as an economic resource and to the nation and the world as a biosphere reserve.

I also believe Highway 85 must not only be allowed to continue in its current existence but that, with potential traffic increases due to the North American Free Trade Agreement and the potential of the monument becoming a national park, improvements to the road must be sought and supported

As long as the proposed Organ Pipe Cactus National Monument management plan does not call for restrictions on Highway 85, it has my support.

Gabrielle David

June 25, 1996

Superintendent, Organ Pipe Cactue National Monument
Route 1, Box 100
Ajo, Arizona 85321

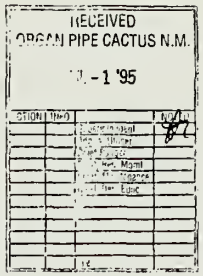
Dear Superintendent:

It hae come to our attention that the Department of Interior is planning to close Arizona highway 85 to through traffic between Why, AZ and Lukeville, AZ.
They are planning to charge an entry permit fee and restrict the speed through the park. The plan also would cloee the border at Lukeville. We are extremely oppoeed to theee new plans. As property owners in Puerto Penaeco (Rocky Point), and frequent travelers, this would be great hardehip on our travele to Rocky Point. Closing the border would require ue to travel an extra 100 milee in Mexico to reach Rocky Point. As thie ie a popular destination for great number of people from the Phoenix and Tucson areas, this plan does not seem to be in the beet interest of Arizonane. It ie aleo a waste of taxpayere' money to implement the plan.

Sincerely,
Jack D. and Betty H. Fahn
[redacted]
Jack D. Fahn
Betty H Fahn

the Guest House Inn
BED BREAKFAST

3 Guest House Road
Ajo, AZ 85321
June 27, 1996



Harold Smith, Superintendent
Organ Pipe Cactus National Monument
Rt 1, Box 100
Ajo, AZ 85321

Dear Mr. Smith,

We strongly feel that a park status would greatly benefit the Organ Pipe Cactus National Monument. As an International Bioshpere Reserve and a national park, this monument would be under more scrutiny to preserve its uniqueness while allowing and attracting more visitors because of its park status.

Our guests come from foreign countries such as Germany, England, Switzerland, and France to tour this monument. If they feel that this remote desert is worth their vacation time, then this monument should be worthy of park status.

Sincerely,

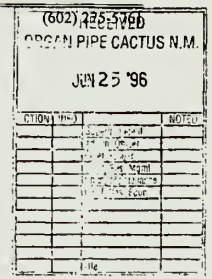
Norma Walker

Michael C. Walker
Guest House Inn

Micheline Fournier

Jean Fournier
Mine Manager's House Inn

JEFF PANTHER
[redacted]
(602) 275-5766



June 24, 1996

Harold Smith
Superintendent
Organ Pipe Cactus National Monument
Rout 1, Box 100
Ajo, AZ 85321

Dear Mr. Smith:

It was with interest that I read the article in the *Arizona Republic* on Friday, June 21, 1996 regarding your efforts to upgrade the monumeot to oational park status.

When my employer transferred me from Southern California to Phoenix three years ago, I thought I would never find another desert spot to replace the beauty of Death Valley. It was to my very pleasant surprise, when on my first visit to Organ Pipe, I feel instantly in love with the stark natural beauty of the place. I have beco visiting Organ Pipe on a very regular basis, in fact often spending two weekends a month (a fact that Ranger Matthew can attest to) and still find the mooument provides an "inner re-chargiog" for me.

I support your efforts to upgrade the status of the mooumeot and would like to be appraised of any public meetiogs regarding the status change.

Cordially,

Jeff Panther

Superintendent H. Smith —

Here in Scottsdale we're being taxed to save the desert @ $60000 to the ACRC Yet at the same time places such as ORGAN PIPE CACTUS N.M GO WANTING SO SAD PEOPLE IN ARIZONA CAN'T see ANY further THAN their own back. YARD. I'VE NEVER HAD ANY desire TO GO TO ROCKY POINT but I HAVE been TO ORGAN PIPE CACTUS. I support MAKING ORGAN Pipe CACTUS N.M. A NATIONAL PARK.

Thank You-
Roc Rogers

[redacted]

PETITION TO THE CONGRESS OF THE UNITED STATES

WE THE TAXPAYERS/VOTERS OF THE UNITED STATES DO NOT WANT ANOTHER "NATIONAL CACTUS PARK" OUT IN THE MIDDLE OF AN ARIZONA DESERT. WE DO NOT WANT MILLIONS MORE OF OUR/CONGRESS'S TAX DOLLARS A YEAR TO BE SPENT TO RE-CLASSIFY THE ORGAN PIPE MONUMENT INTO THE SONORA DESERT NATIONAL PARK! INCREASE SPEED LIMIT TO 65 M.P.H.

NAME	ADDRESS/CITY/STATE
[redacted]	

Appendix D: Presidential Documents

Federal Register, Government-to-Government Relations With Native American Tribal Governments
Federal Register, Indian Sacred Sites

Federal Register
Vol. 59, No. 85
Wednesday, May 4, 1994

Presidential Documents

Title 3—

The President

Memorandum of April 29, 1994

Government-to-Government Relations With Native American Tribal Governments

Memorandum for the Heads of Executive Departments and Agencies

The United States Government has a unique legal relationship with Native American tribal governments as set forth in the Constitution of the United States, treaties, statutes, and court decisions. As executive departments and agencies undertake activities affecting Native American tribal rights or trust resources, such activities should be implemented in a knowledgeable, sensitive manner respectful of tribal sovereignty. Today, as part of an historic meeting, I am outlining principles that executive departments and agencies, including every component bureau and office, are to follow in their interactions with Native American tribal governments. The purpose of these principles is to clarify our responsibility to ensure that the Federal Government operates within a government-to-government relationship with federally recognized Native American tribes. I am strongly committed to building a more effective day-to-day working relationship reflecting respect for the rights of self-government due the sovereign tribal governments.

In order to ensure that the rights of sovereign tribal governments are fully respected, executive branch activities shall be guided by the following:

(a) The head of each executive department and agency shall be responsible for ensuring that the department or agency operates within a government-to-government relationship with federally recognized tribal governments.

(b) Each executive department and agency shall consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments. All such consultations are to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals.

(c) Each executive department and agency shall assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.

(d) Each executive department and agency shall take appropriate steps to remove any procedural impediments to working directly and effectively with tribal governments on activities that affect the trust property and/or governmental rights of the tribes.

(e) Each executive department and agency shall work cooperatively with other Federal departments and agencies to enlist their interest and support in cooperative efforts, where appropriate, to accomplish the goals of this memorandum.

(f) Each executive department and agency shall apply the requirements of Executive Orders Nos. 12875 ("Enhancing the Intergovernmental Partnership") and 12866 ("Regulatory Planning and Review") to design solutions and tailor Federal programs, in appropriate circumstances, to address specific or unique needs of tribal communities.

The head of each executive department and agency shall ensure that the department or agency's bureaus and components are fully aware of this memorandum, through publication or other means, and that they are in compliance with its requirements.

This memorandum is intended only to improve the internal management of the executive branch and is not intended to, and does not, create any right to administrative or judicial review, or any other right or benefit or trust responsibility, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

The Director of the Office of Management and Budget is authorized and directed to publish this memorandum in the Federal Register.

William J. Clinton

THE WHITE HOUSE,
Washington, April 29, 1994.

[FR Doc. 94-10677
Filed 5-3-94; 2:00 pm]
Billing code 3110-01-M

Editorial note: For the President's remarks to American Indian and Native Alaska tribal leaders, see the *Weekly Compilation of Presidential Documents* (vol. 30, issue 18)

Presidential Documents

Executive Order 13007 of May 24, 1996

Indian Sacred Sites

By the authority vested in me as President by the Constitution and the laws of the United States, in furtherance of Federal treaties, and in order to protect and preserve Indian religious practices, it is hereby ordered:

Section 1. *Accommodation of Sacred Sites.* (a) In managing Federal lands, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.

(b) For purposes of this order:

(i) "Federal lands" means any land or interests in land owned by the United States, including leasehold interests held by the United States, except Indian trust lands;

(ii) "Indian tribe" means an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to Public Law No. 103–454, 108 Stat. 4791, and "Indian" refers to a member of such an Indian tribe; and

(iii) "Sacred site" means any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

Sec. 2. *Procedures.* (a) Each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, as appropriate, promptly implement procedures for the purposes of carrying out the provisions of section 1 of this order, including, where practicable and appropriate, procedures to ensure reasonable notice is provided of proposed actions or land management policies that may restrict future access to or ceremonial use of, or adversely affect the physical integrity of, sacred sites. In all actions pursuant to this section, agencies shall comply with the Executive memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments."

(b) Within 1 year of the effective date of this order, the head of each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall report to the President, through the Assistant to the President for Domestic Policy, on the implementation of this order. Such reports shall address, among other things, (i) any changes necessary to accommodate access to and ceremonial use of Indian sacred sites; (ii) any changes necessary to avoid adversely affecting the physical integrity of Indian sacred sites; and (iii) procedures implemented or proposed to facilitate consultation with appropriate Indian tribes and religious leaders and the expeditious resolution of disputes relating to agency action on Federal lands that may adversely affect access to, ceremonial use of, or the physical integrity of sacred sites.

Sec. 3. Nothing in this order shall be construed to require a taking of vested property interests. Nor shall this order be construed to impair enforceable rights to use of Federal lands that have been granted to third parties through final agency action. For purposes of this order, "agency action" has the same meaning as in the Administrative Procedure Act (5 U.S.C. 551(13)).

Sec. 4. This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it, create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by any party against the United States, its agencies, officers, or any person.

William J. Clinton

THE WHITE HOUSE,
May 24, 1996.

[FR Doc. 96–13397
Filed 5–27–96; 8:45 am]
Billing code 3195–01–P

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by Mary Ryan, visual information technician, Resource Planning Group, Denver Service Center. NPS D-80B, July 1997

UNITED STATES DEPARTMENT OF THE INTERIOR • NATIONAL PARK SERVICE