CHAPTER FOUR
COVERED PLANTS AND ANIMALS

Part A
Covered Mammals

BATS – 8 species. LONG-LEGGED MYOTIS (*Myotis volans*)**, FRINGED MYOTIS** (*Myotis thysanodes*)**, CALIFORNIA LEAF-NOSED BAT** (*Macrotus californicus*), **POCKETED FREE-TAILED BAT** (*Nyctinomops femorosaccus*), **SPOTTED BAT** (*Euderma maculatum*), **PALLID BAT** (*Antrozous pallidus*), **WESTERN MASTIFF BAT** (*Eumops perotis*) **TOWNSEND'S BIG-EARED BAT** (*Corynorhinus townsendii*)

Status: Federal: Species of Concern (except pallid bat, pocketed free-tailed bat)
California: Species of Special Concern (except long-legged myotis, fringed myotis)
Date of Evaluation: October 21, 1998, CDFG Bishop office, October 27, 1998, FWS Ventura office, and September 2, 1999, CDFG Sacramento office.
Attendees: LaPré, Racine, Bransfield, Bolster. Reviewed by Nicol, Jones.

Findings

The pocketed free-tailed bat and fringed myotis could be dropped from the covered species list. These species appear to be accidental in the planning area.

Habitat: The California leaf-nosed bat and Townsend's big-eared bat are colonial cave-dwellers thought to have declining populations. The California leaf-nosed bat is known to be dependent on desert wash foraging habitat near the roosts. The Townsend's big-eared bat is dependent on riparian habitat within five miles of the roosts.

The spotted bat, pallid bat, and Western mastiff bat are cliff-dwellers. However, roosts of pallid bat have been located in mine adits at seven locations within the planning area. The only identified cliff roosts for spotted bat are within Red Rock Canyon State Park. No roosts of Western mastiff bat have been located, but roosts are suspected within Joshua Tree National Park.

The long-legged myotis is primarily a tree-dweller occurring at higher elevations than those found in the planning area. It has been found, however, in a building at a transient roost in the spring on China Lake NAWS.

The protection of roosts is the most important conservation measure that can be achieved. Several types of roosts have been defined: 1) maternity roosts, where the bats give birth and nurse their young, 2) hibernation roosts, where bats spend the winter, 3) night roosts, which provide shelter between foraging bouts, and day roosts, used by resident bachelor

males, as migratory stopovers, and for reproductive behavior. Roost sites are often traditional, being utilized for many successive years, and contain conditions of temperature, humidity, air flow, and light that are not easily replicated or available in many locations. Proximity to foraging areas is important for most roosts.

All maternity and hibernation roosts containing more than ten Townsend's big-eared bat or California leaf-nosed bats or 25 bats of the other six species are considered significant roosts. Eighteen significant roosts are known from the planning area. Of these, 12 are maternity roosts, 4 are hibernation roosts, 2 are both, and 1 is unspecified. In addition, approximately 30 other sites are known as bat roosts, but are not termed significant roosts.

Current Distribution: Two species, pocketed free-tailed bat and fringed myotis, are marginal or accidental in the planning area.

All except one of the identified significant roosts are on public (NPS and BLM) or military lands.

The Dale Mining District in the Pinto Mountains, including portions of Joshua Tree National Park, contains many shafts and adits known to harbor bats of several species. Six significant roosts have been located, and the potential for several more is present.

Biological studies on military bases have detected six significant roosts at China Lake NAWS, and one at Twentynine Palms MCAGCC.

The largest roost known, containing over 10,000 bats of several species, is under the Interstate 15 bridge at the Mojave River crossing. This site is currently under investigation. It may not be a significant roost for the eight target species.

Threats: The most serious direct threats to bats are disturbances of hibernation and maternity roosts and destruction of roosting habitat, primarily old mines and natural caves. Old buildings and bridges also provide roosts for some species. Loss and degradation of foraging areas threatens certain species.

Current Management: Long-term conservation is provided in State Parks where special steps have been taken to protect bat roosts including installation of bat-friendly grates, restricting human access to abandoned mines, and prohibiting rock climbing and rapelling near bat roosting areas.

BLM has established guidelines for conservation of bat roosts associated with caves and abandoned mines. Potential bat roosts located in abandoned mines have been protected by fences installed by BLM for public safety purposes.

Identified Shortfall: Protection of bats in the planning area has been limited to roosting sites on an as-found basis. Review of the current management activities shows that there is need for systematic identification and inventory of potential roosting sites within the planning area. In addition, known significant roost sites remain susceptible to human intrusion and need protection. No specific protections are in place for foraging habitat.

Biological Goals

Maintain and enhance viability of all bat populations in the planning area, regardless of species. Objective 1. Install bat-accessible gates at the entrance of all significant roosts. Objective 2. Protect foraging habitat.

Authorized Take

Take of bats and their roosting habitat should be limited to sites harboring ten or fewer bats for California leaf-nosed bat and Townsend's big-eared bat and 25 or fewer bats of all other species. Loss of significant roosts is not covered by incidental take permits. Projects involving take of bats under the limit and of non-significant bat roosts should follow procedures (specified below) to allow for safe exit of the bats.

Conservation Strategy

Recommend protecting all significant bat roosts by installation of gates over mine entrances and restricting human access. At China Lake NAWS, priority should be given to the mines in Mountain Springs Canyon, followed by Wilson Canyon. Interim protection should include posting of signs warning visitors of the sensitivity of the bat roosts. Continue fencing around (but not over) open abandoned mine shafts to provide bats access to roosts and to reduce hazards to the public.

Two bat management areas should be established. The first would be in the Pinto Mountains, on lands managed by Joshua Tree National Park and BLM. The second would be on China Lake NAWS. The Navy could develop a plan to protect bats as part of its Natural Resources Management Plan. For both areas, the recommended prescription is to systematically survey mines and other potential roosting sites within the management areas and provide gates or other measures to allow bat passage and prevent human entry at adits where significant roosts are found. Public lands outside military bases containing significant roosts could be withdrawn from mineral entry, subject to valid existing rights.

Riparian habitat should be preserved within five miles of known maternity roosts for Townsend's big-eared bat. Recommend prohibiting unauthorized water diversions. Grazing should be monitored, if present, to assure no undue degradation of the riparian habitat. Recommend a prohibition on woodcutting.

Recommend protecting desert wash vegetation within three miles of known or newly discovered maternity and hibernation roosts of California leaf-nosed bats. Vehicular use of washes in these locations should be prohibited using the BLM route designation process.

Water sources impacted (removed) near significant bat roosts should be replaced.

Survey requirements for determination of significant roosts: Projects which involve disturbance of natural caves, cliff faces, mine shafts, abandoned buildings or bridges have the potential to destroy significant bat roosts. These projects should be required by the lead agency to conduct surveys to determine use of these features by bats.

Surveys should be conducted both in winter and in summer to determine if a potential roost is utilized by bats for hibernation or for maternity colonies. Surveys that indicate a roost is used during one of the seasons should be repeated during the other season to determine if the roost is used by bats for both functions.

Colonial bats may move between roosts, or abandon roosts if disturbed. If the disturbance is eliminated, the bats may return. Therefore, a roost with substantial deposits of bat guano is assumed to be a significant roost, even if bats are not present. "Substantial deposits" should be determined by a qualified biologist and verified by the Department.

Safe exit of bats from non-significant roosts: Prior to disturbance or removal of a non-significant roost, a project sponsor should provide for safe eviction of any bats present by a qualified biologist in consultation in consultation with the Department. Safe procedures include:

- Eviction during the appropriate season. No eviction should occur during maternity or hibernation seasons for the species.

- Temporary closure of the roost after the evening exit flight, then entering the roost and capturing any remaining bats.

- This procedure should be repeated for at least two nights to insure that all bats have been removed safely.

Monitoring

Bat populations in all significant roosts should be censused every five years. Approved projects that impact bats under the take limit should be reported annually to the Department and the Service. Effectiveness of mitigation measures providing for safe exit of bats should be reported.

Permit Compliance Summary

Goal: Maintain bat populations by protecting and enhancing significant roosts and essential foraging habitat.

Take: Unspecified acreage, but take could be allowed for any site harboring 25 or less bats of any species and 10 or less bats of California leaf-nosed bat or Townsend's big-eared bat.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Gate all significant mine roosts. Close mine roads within ¼ of significant roosts. Withdraw from mineral entry. Close roads within desert washes and near riparian foraging sites.	Continue surveys of areas with high potential for containing significant roosts. Monitor status of known significant roosts every five years. Report take annually.	Gate mine entrances if new significant roosts are found. Withdraw from mineral entry. If populations decline or new threats are discovered, take corrective actions.	Golden eagle. Prairie falcon. Inyo California towhee.

Discussion: The management program addresses the threats by:

- preserving a minimum of 18 significant roosts.
- minimizing disturbance and degradation of desert wash and riparian habitat near significant roosts of California leaf-nosed bat and Townsend's big-eared bat.

This strategy generally meets the objectives of the permit applicants by providing a standard for permit coverage and mitigation and a uniform survey protocol. Mining would be unrestricted at sites not containing significant roosts.

The management program and withdrawal from mineral entry results in the retention of all of the existing known significant roosts, both maternity roosts and hibernation roosts. Unprotected mines containing significant roosts would be gated to prevent human entry. This would prevent further declines and may allow for increases in the bat populations.

Without the protective measures (gating of entrances), bat roosts could continue to be lost due to disturbance from entry at sensitive periods (maternity and hibernation). Mining and other projects which disturb occupied mine adits could be approved without knowing the importance of the site for bats if the survey protocol is not followed. Vehicle and other

disturbance of desert washes and riparian sites near roosts of Townsend's big-eared bats and California leaf-nosed bats could continue to degrade foraging habitat.

The proactive protection of known roosts will benefit a greater number of bats than the incidental take, which, although not specified, is limited to non-significant roosts. Permanent protection of significant roosts is provided by the relinquishment of claims and withdrawal of mining. The take is thus fully mitigated for the bat populations in the West Mojave.

BIGHORN SHEEP (*Ovis canadensis nelsoni*)

Status: Federal: None California: None
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: Bighorn are found within most of the mountainous areas of the planning area and are more abundant in those ranges with natural water sources. Habitat has been classified as occupied and unoccupied, permanent and seasonal. Concentration areas are locations essential to bighorn and include traditional water sources and lambing areas. Cooperative management, including installation of waterholes, re-introductions, and monitoring of populations by telemetry has been successful on military bases.

Current Distribution: The majority of bighorn sheep herds are located on military bases, especially China Lake NAWS and Twentynine Palms MCAGCC. Additional populations are found in the Rodman and Ord Mountains, Newberry Mountains, and on the north slope of the San Bernardino Mountains. Much of the habitat is within designated Wilderness.

Threats: Potential threats to bighorn include loss or disturbance of springs and waterholes, incremental loss of habitat, contact with domestic sheep which can introduce disease, and blockage of linkages by roads, canals, or fences.

Rural development with fencing threatens corridors; one corridor extends through the city limits of 29 Palms. The dispersal corridor between the San Bernardino Mountains and the Granite Mountains is threatened by rural development.

Mining operations have not been shown to significantly impact bighorn in the San Bernardino Mountains, although the mines result in a small loss of habitat and bring new disturbances into the permanent range of the bighorn.

New cyanide heap leach mines have the potential to harm bighorn if open water containing

cyanide is present on operations within bighorn habitat.

Current Management: Conservation of bighorn sheep populations has been furthered by changes to BLM's livestock grazing management program within the Newberry and Ord Mountain ranges. The amount of forage for cattle has been reduced by 98 animal unit months to benefit bighorn sheep. In addition, ephemeral sheep grazing has been curtailed east of Highway 247 (east of Stoddard Valley) to increase forage for bighorn sheep and to reduce the potential for the transmission of disease by domestic sheep.

Rehabilitation of the habitat and other measures to implement the Afton Canyon and Big Morongo Canyon ACEC plans have improved access to water and forage for the bighorn sheep population in these areas. Designation has closed motorized vehicle routes and reduced human disturbance to the benefit bighorn sheep populations in the Ord Mountain, Rodman Mountain, Argus Mountains, San Gorgonio Mountains and the Cleghorn Lakes and Sheephole Valley wilderness areas.

In addition, four big game waters (guzzlers) have been installed, bighorn sheep have been successfully transplanted in two locations; and burros have been removed in the Argus Range resulting in the improvement of riparian habitat.

Identified Shortfall: Closure of vehicle routes is necessary near sensitive bighorn sheep population located outside of wilderness areas. Corridors should be identified for the passage of sheep between populations. Special management of these corridors should be provided, including freeway under passes at the most critical crossings, and the consolidation of public lands.

Biological Goals

Maintain and enhance the populations of bighorn throughout the planning area. Increase the population size in each metapopulation to conform with the statewide goals.

Authorized Take

Unspecified acreage of occupied habitat primarily consisting of expansion of existing mining operations on the north slope of the San Bernardino Mountains. No direct loss of individuals is anticipated. Take of most linkage habitat would be allowed throughout the planning area. Occupied linkage habitat near Twentynine Palms and Apple Valley should be conserved until crucial new linkages are established.

Conservation Strategy

Recommend protecting natural water sources. On military lands, suggest that bivouacs not be allowed near springs; post springs as off-limits. Water diversions at bighorn springs

should be prohibited.

Avoid helicopter overflights near lambing areas, at least seasonally. The Department should make these locations known to the military.

Recommend enforcement of "nine-mile rule", which is the standard for separation of domestic sheep and bighorn.

Continue re-introductions and monitoring on military bases.

Continue removal of burros in Argus Mountains because of damage to springs.

Mitigation measures for mining proposals in the San Bernardino Mountains and San Gabriel Mountains should include funds to monitor potentially impacted sheep herds.

Known and newly-discovered lambing areas should be conserved and withdrawn from mineral entry on public lands.

Suggest that the BLM require a longer time period for review of mine exploration plans and include the Department - current 3809 regulations require notice only with 15 day review. A minimum of 30 days is recommended.

Provide methods for crossing new freeways, aqueducts and canals that otherwise would impede movement of bighorn between seasonal and permanent occupied habitat.

Recommend consolidating BLM lands east of Twentynine Palms to create a public lands corridor between the Bullion Mountains and the Pinto Mountains.

Consider fencing heap leach pads if in bighorn habitat.

Acquire private lands within designated Wilderness through BLM/Wildlands Conservancy acquisition.

Consider creation of an open space corridor between the San Bernardino Mountains and the Granite Mountains (see map).

Designate off-highway vehicle routes as open or closed along the north slope of the San Bernardino Mountains consistent with the carbonate endemic plants conservation strategy (see map following carbonate endemic plants).

Monitor herd numbers following Department protocol for 2 ranges per year. Ten ranges now support bighorn, so monitoring is on a five-year cycle. Any re-introduced herds should be monitored.

Permit Compliance Summary

Goal: Maintain and enhance the populations of bighorn throughout the planning area. Increase the population size in each metapopulation to conform with the statewide goals.

Take: Take should be allowed as incremental loss of habitat in all classifications. No loss of animals should be allowed.

Minimization & mitigation	Monitoring	Adaptive Management	Other Species
Protect water sources. Enforce "nine mile" rule. Reduce OHV access on north slope of SB Mts. Create open space corridor between San Bernardino Mountains and Granite Mountains. Acquire wilderness inholdings.	Continue telemetry research in the San Bernardino Mountains. Monitor herd numbers in five year cycle.	Define occupied dispersal corridors, then protect as open space. Withdraw new lambing areas from mining.	Golden eagle. Prairie falcon. Inyo California towhee. Carbonate endemic plants. Pygmy poppy. Bendire's thrasher.

Discussion: The management program addresses the threats by:

- minimizing human disturbance in occupied habitat through reduction of road network in the northern face of the San Bernardino Mountains

- minimizing potential conflicts by acquiring private lands within Wilderness.

Provisions for re-introduction of bighorn into historical habitat on military bases will increase the acreage of occupied habitat. This increase exceeds the anticipated take of occupied habitat, so that take is fully mitigated.

Note: The Service did not agree to issue assurances for bighorn sheep. Reasons given were that this species is intensively managed by the Department, which also allows hunting of bighorn in regions outside the planning area.

The Department reserves the right to cancel assurances if the bighorn population goes below a minimum level based on the statewide metapopulation model. This model establishes minimum herd levels for each mountain range occupied by bighorn.

Part B
Covered Reptiles

MOJAVE FRINGE-TOED LIZARD (*Uma notata*)

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 14, 1998 Riverside BLM District Office. August 17, 1999 Palm Springs BLM office.
Attendees: Nicol, Black, Haigh, LaPré

Findings

Habitat: This species is an obligate sand-dweller, found in dunes, sand fields, sand hummocks, and other sand deposits throughout the Mojave Desert in California. Its elevation ranges from 300 to 3000 feet. Its survival requires conservation of the blowsand ecosystem processes, including the sand source, fluvial sand transport areas, aeolian sand transport areas, wind corridors, and the occupied habitat.

Current Distribution: Mojave fringe-toed lizards occur at several disjunct localities in the planning area. Occupied habitat is found at the Saddleback Buttes region of Los Angeles County, Edwards Air Force Base, El Mirage, Mojave River near Barstow, Mojave Valley, Alvord Mountain, Pisgah, Cronese Lakes, Dale Lake, Twentynine Palms, and Harper Dry Lake.

Threats: Urban and rural development has fragmented populations along the Mojave River and at Twentynine Palms. Agricultural development has eliminated and fragmented populations in the Mojave Valley. These threats will continue during the duration of the permit.

Flood control structures which prevent the waterborne flow of sand towards the occupied habitat are a major threat.

Windbreaks that impede the aeolian transport of sand to the occupied habitat are a threat.

Vehicle use of the occupied habitat is a threat.

Current Management: Portions of habitat are within BLM's Harper Dry Lake, Cronese Lakes, and Afton Canyon ACECs; vehicle access controls have been implemented in all three. The Sheephole Mountains Wilderness protects a substantial portion of the Dale Lake population. Habitat also occurs within Saddleback Butte State Park; off highway vehicle use is prohibited within the Park. The Big Rock Creek drainage is partially within Los Angeles County has designated Significant Ecological Areas which protect fringe-toed lizards at Alpine Butte and Piute Butte, and the sand source and sand transport

system is within the Big Rock Wash Significant Ecological Area. Conservation of fringe-toed lizards at Edwards AFB is compatible with the Integrated Resource Management Plan.

Identified Shortfall: Habitat is not adequately protected at four of the seven remaining unfragmented sand habitats (El Mirage, Alvord Mountain, Pisgah, and Dale Lake) and is only partially protected in the Saddleback Butte Area. Protection needed consists of keeping vehicles off occupied sand dunes and insuring continuation of the source and flow of sand.

Biological Goals

Preserve the complete blowsand ecosystem at eight of the eleven sand habitats occupied by the Mojave fringe-toed lizard.

Authorized Take

Take should be allowed at the fragmented populations in the Mojave Valley, along the Mojave River, and at Twentynine Palms. The General Plan for the occupied sand dune habitat in Twentynine Palms depicts several residential and commercial designations, which are incompatible with conservation of the Mojave fringe-toed lizard.

Conservation Strategy

Recommendations: Recommend prohibiting flood control structures that would impede sand transport at Big Rock Creek, Sheep Creek, and the Mojave River. Aggregate mining in these drainages should be regulated to assure continued passage of sand downstream during flood flows.

Widen the bridge over Big Rock Creek when Highway 138 is improved to allow better sand and water flow and enhance the wildlife corridor between the desert and the San Gabriel Mountains. The existing double channel divided by fill material should be converted into a single long and high span.

Suggest a 100' setback for projects on undeveloped private lands from minor drainages flowing from the San Gabriel Mountains to the desert near El Mirage. These drainages are Boneyard Canyon, La Montaine Creek, Puzzle Canyon, Jesus Canyon, and Mescal Creek in Los Angeles County and Sheep Creek and one unnamed tributary west of Sheep Creek in San Bernardino County. The setback should maintain the integrity of the drainages which supply the sand to the El Mirage Mojave fringe-toed lizard population.

Acquire occupied habitat adjacent to the northeast edge of Saddleback Butte State Park, and west of Dale Lake.

Consider imposition of a mitigation fee for take of occupied habitat along the Mojave River and in the Mojave Valley.

Designate vehicle use on public lands with occupied habitat as closed.

Restrict the construction of windbreaks upwind of occupied habitat.

Widen the boundaries of the Big Rock Creek Significant Ecological Area to include more of Big Rock Wash and a linkage between Piute Butte and Saddleback Butte State Park (see map).

Suggest consolidating federal lands at the west edge of the dune habitat in the Dale Lake population. Retain public (BLM) lands within the Mojave River wash.

Recommend protective management at Fort Irwin. The Resource Management Plan for the base should insure that military operations are compatible with conservation of the sandy occupied habitat at Red Pass Lake and Bitter Springs.

If the blowsand on the west slope of Alvord Mountain area is included in the expansion of Fort Irwin, recommend that this occupied habitat be conserved.

Continue protective management at Edwards Air Force Base.

Amend the Cronese Basin ACEC Plan to include protection of the Mojave fringe-toed lizard as a primary goal.

Designate the Pisgah Crater area as an ACEC. This is a multispecies area also harboring the desert tortoise, white-margined beardtongue, crucifixion thorn and bats, though no significant roosts were located. Pisgah Crater and lava flow form a significant geological feature. The interface between white sand and black lava has attracted biological interest due to the contrasting modes of protective coloration found in reptiles and small mammals of the area. Factors that should be considered when boundaries are identified are the need to avoid existing mining operations, and the actual location of biological resources. Acquire lands from Catellus Development Corporation within the Pisgah blowsand habitat as part of the BLM-Wildlands Conservancy acquisition.

Monitoring: Sand sources for the conserved populations need to be better defined. Dune movement should be measured or estimated. This can be accomplished by placement of pole within the sand fields and noting accumulation of sand over time.

The extent of the population at El Mirage is unknown, and the lizards have not been recorded for many years. This site requires a delineation of blowsand habitat and census of the lizard population in order to determine if conservation measures are appropriate.

The extent of the blowsand habitat at Edwards Air Force Base, Alvord Mountain, Pisgah, Cronese Lakes, Dale Lake, and Harper Dry Lake should be determined with greater precision to better define the local distribution of occupied habitat.

. Construction of windbreaks potentially affecting occupied habitat should be monitored.

Invasion of occupied habitat by exotic plants which could stabilize the blowsand should be monitored.

Permit Compliance Summary

Goal: Preserve the complete blowsand ecosystem at eight of the eleven sand habitats occupied by the Mojave fringe-toed lizard.

Take: Take should be allowed at the fragmented populations in the Mojave Valley, along the Mojave River, and at Twentynine Palms.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Prohibit vehicles on occupied habitat. Prohibit flood control barriers to waterborne sand transport. Disallow windbreaks in the aeolian sand transport areas. Purchase private lands within occupied habitat. Expand Big Rock Creek SEA and link Piute Butte SEA to Saddleback Butte State Park. Consider mitigation fee for development of occupied habitat in the Mojave Valley and Twentynine Palms. Require 100' setbacks along drainages from the San Gabriel Mountains. Consolidate public lands on west side of Dale Lake.	Delineate blowsand habitat at Edwards Air Force Base, Alvord Mountain, Pisgah, Cronese Lakes, Dale Lake, and Harper Dry Lake. Delineate habitat at El Mirage and census lizards. Define sand sources. Measure dune movement.	Prohibit vehicle traffic on occupied habitat. Delete conservation measures if not warranted; prohibit vehicles on habitat and protect sand sources if viable population is found. Adjust boundaries as necessary to protect drainages and wind transport area. Extend conservation downwind if warranted.	Desert tortoise. Mohave ground squirrel. Sand linanthus. Short-joint beavertail cactus. White-margined beardtongue. Crucifixion thorn.

Discussion: The management program addresses the threats by:

- Protecting the upstream and upwind elements of the blowsand ecosystem at Saddleback Buttes, El Mirage, Dale Lake, Pisgah, Cronese Lakes, Harper Dry Lake and Alvord Mountain.

- minimizing potential take and degradation of habitat through by prohibiting vehicles on dunes.

- minimizing potential conflicts by acquiring private lands within occupied habitat.

- conserving the fluvial sand transport system by imposing setbacks along sand source drainages.

This strategy generally meets the objectives of the permit applicants by allowing expansion of the community of Twentynine Palms, agricultural development in the Mojave Valley, and rural or urban expansion in Barstow and Lenwood.

Without minimization and mitigation measures, a high risk of disruption of the blowsand ecosystem would continue. Occupied habitats could be easily fragmented, becoming too small to support viable populations.

Taken as a whole, the anticipated take is fully mitigated by acquiring lands and applying management beneficial to the fringe-toed lizard populations in the West Mojave.

Note: This report generally recommends allowing unlimited take within existing city limits. The Department has recommended reconsideration of this policy for the large dune occupied by fringe-toed lizards in Twentynine Palms. This site may better conserve the Mojave fringe-toed lizard than conservation at El Mirage or Harper Dry Lake.

SAN DIEGO HORNED LIZARD (*Phrynosoma coronatum blainvillei*)

Status: Federal: FWS Species of Concern
California: Species of Special Concern
Dates of Evaluation: April 14, 1998 Riverside BLM District Office. August 17, 1999 Palm Springs BLM office.
Attendees: Nicol, Black, Haigh, LaPré

Findings

Habitat: Within the planning area, the San Diego horned lizard is restricted to juniper woodland, Mojave mixed woody scrub and chaparral habitats above 3,000 feet elevation. This lizard prefers areas with loose, fine soils, an abundance of open areas for basking, and

plenty of native ants and other insects.

Current Distribution: From the Antelope Valley California Poppy State Reserve east along the base of the San Gabriel and San Bernardino Mountains to Joshua Tree National Park. The distribution is approximately the same as that of the gray vireo and short-joint beavertail cactus. This lizard is believed to be extirpated from the Mojave River near Oro Grande and from many areas near Palmdale. Rural development on the north slope of the San Gabriel Mountains has fragmented habitat so much that few viable conservation areas remain.

Threats: Urban and rural development on the north slope of the San Gabriel Mountains are the primary threat to the long-term viability of the desert populations. Increased predation by cats and dogs are a threat.

Collection by collectors and children have contributed to the decline in numbers of this species, and this threat may continue today.

Off-road vehicles pose a potential threat, particularly at the Mojave Forks dam.

Current Management: Limited protection is currently provided on public land in the Juniper Flats ACEC, in the Antelope Valley Poppy Preserve and in Joshua Tree National Park. Only a small portion of the habitat is located in these areas, which are not subject to urbanization. Public outreach and education programs conducted by BLM stress the importance of not colleting lizards.

Identified Shortfall: No public lands conservation area large enough to support a viable population of the San Diego horned lizard exists. To ensure long-term conservation in key habitat areas, acquisition of private land from willing sellers should be considered. Activities in key sandy washes such as extraction of sand and gravel and construction of new flood control structures and roads need to be managed to protect habitat. Motorized vehicle access in areas adjacent to the San Bernardino National Forest and within the Juniper Flat ACEC needs to be reduced.

Biological Goals

Conserve two large representative areas, Big Rock Creek and Mescal Creek, with connectivity of the overall range through the National Forests. Maintain smaller populations within rural development areas along streamcourses.

Authorized Take

Take should be allowed outside the two major conservation areas.

Conservation Strategy

Suggest acquiring lands within the Desert-Montane Transect (Mescal Creek) Significant Ecological Area and the Big Rock Creek area (see map). Acquire lands to connect the Antelope Valley California Poppy Preserve with the Libre Ridge SEA.

Recommend setbacks of 100' for projects on undeveloped private lands along the drainage on the north base of the San Gabriel Mountains. These drainage are Banneret Canyon, La Montan Creek, Puzzle Canyon, Jesus Canyon, and Mescal Creek in Los Angeles County. In San Bernardino County these drainage include Sheep Creek, Horse Canyon, Manzanita Wash, Oro Grande Wash and twelve unnamed tributaries between the Los Angeles County line and Interstate 15. East of Interstate 15 to the Mojave River are an additional twelve tributaries.

Conserve this species within the carbonate endemic plants management zone by creation of one or two ACECs and reduction of the road network consistent with the carbonate endemic plants conservation strategy (see map following carbonate endemic plants).

The BLM Juniper Flats ACEC Plan should be amended to specifically provide protection for this species by designation of routes of travel and closure of unnecessary roads.

Control off-road vehicles at the Mojave Forks dam.

Monitoring: Determine if Forest Service management insures continuation of contiguous horned lizard populations from east to west.

Conduct periodic review of potential effects of adjacent developments on horned lizard populations at Big Rock Creek and Mescal Creek conservation areas.

Monitor vehicle use at Mojave Forks dam.

Permit Compliance Summary

Goal: Conserve two representative habitats, each supporting a large, viable population of the San Diego horned lizard. Maintain populations along drainages within rural development areas.

Take: Rural residential development north of the San Gabriel Mountains from Phelan to Palmdale, except for the two conservation areas, would continue. A 5% rate of growth for San Bernardino and Los Angeles counties is assumed.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Require setbacks from drainages. Route designation in the carbonate plants management zone. Acquisition of conservation lands.	Conduct periodic review of potential effects of adjacent developments on horned lizard populations at Big Rock Creek and Mescal Creek. Monitor vehicle use at Mojave Forks dam.	Fence conservation areas, post signs. Increase law enforcement, place additional barriers.	Short-joint beavertail cactus. Gray vireo. Carbonate endemic plants. Pygmy poppy.

Discussion: The management program addresses the threats by:

- minimizing human disturbance in occupied habitat through reduction of the road network in the San Bernardino Mountains within the carbonate plants management zone.

- minimizing encroachment on drainages from the San Gabriel and San Bernardino Mountains to the desert by requiring setbacks for development.

- acquisition of two large conservation areas.

This strategy meets the objectives of the permit applicants by allowing continued rural development in San Bernardino County and continued suburban development in Palmdale and Hesperia. The SEAs in Los Angeles County (Big Rock Wash and Mescal Creek [desert-montane transect]) should be enhanced by acquisition of the conservation areas.

Without minimization and mitigation measures, rural development would continue to fragment habitat from Phelan to Littlerock, and suburban development in Palmdale would continue to eliminate habitat. The population at the Antelope Valley California Poppy Preserve would continue to be isolated from the Libre Ridge Significant Ecological Area. No viable conservation area would be created, and connectivity with populations in the Angeles National Forest could be lost.

SOUTHWESTERN POND TURTLE (*Clemmys marmorata pallida*)

Status: Federal: FWS Species of Concern
California: Species of Special Concern
Date of Evaluation: April 14, 1998 Riverside BLM District Office
Attendees: Nicol, Black, Haigh, LaPré

Findings

Pond turtles are declining throughout southern California, and few viable populations remain. Most of the distribution is on the coastal slope, where river and stream channelization and urban development have extirpated many populations. A petition for federal listing of this species as threatened or endangered was submitted to the Fish and Wildlife Service, but rejected on the basis of insufficient evidence. The Mojave Desert populations are somewhat unique because they are discontinuous with the coastal drainage. Existing laws regulating modification of wetlands provide a measure of protection for this species.

Habitat: Pond turtles are found within and adjacent to perennial water, especially at locations containing ponds. The turtles utilize adjacent uplands as well as the wetland habitats. Nest sites may be located several hundred feet from the water's edge.

Current Distribution: The Southwestern pond turtle is found within the Mojave River in areas of permanent water, such as Mojave Narrows, Camp Cady, and Afton Canyon. It is known historically from Deep Creek at the southern edge of the planning area in the San Bernardino Mountains. A relatively large population is found west of Palmdale at Lake Elizabeth. It also occurs along Amargosa Creek and may occur along its tributaries.

Potential habitat is found on public and private land in the Kelso Valley at the northwest boundary of the planning area. Additional potential habitat is located within the Jawbone-Butterbredt ACEC.

Threats: Urban and rural development on the north slope of the San Gabriel Mountains are the primary threat to the long-term viability of the Elizabeth Lake and Amargosa Creek populations.

Urban and agricultural demands on the water sources at the Mojave River pond turtle locations are a threat.

Collection by collectors and children have contributed to the decline in numbers of this species, and this threat may continue today.

Current Management: Long-term conservation is provide in the Afton Canyon and

Jawbone/Butterbredt ACECS; the Mojave River Narrows Regional Park; and at Camp Cady Wildlife Management Area. Measures include removal of non-native plants and limitations on livestock grazing.

Identified Shortfall: There is a need for basic information to support management decisions including:

- Research to determine the cause of declining populations in the West Mojave region.
- Surveys to determine if the species is present in other riparian areas in the region.

Biological Goals

Conserve all remaining populations in the Mojave River, Lake Elizabeth and Amargosa Creek.

Authorized Take

Take would be allowed outside the conservation areas. This is expected to consist of small tributaries of Amargosa Creek west of Palmdale. No estimate of acreage or population numbers is available. If pond turtles are located in Kelso Creek and the Jawbone-Butterbredt ACEC, take should not be permitted.

Conservation Strategy

Suggest that incompatible development within the wetland habitats of the Mojave River and Amargosa Creek not be allowed.

Retain a 200' upland buffer adjacent to the conserved wetlands where feasible.

Conduct surveys of Kelso Creek and Jawbone-Butterbredt ACEC. Continue riparian restoration at Afton Canyon ACEC. Continue monitoring of turtle populations at Camp Cady Ecological Reserve and Afton Canyon ACEC.

Permit Compliance Summary

Goal: Conserve all remaining populations in the Mojave River, Lake Elizabeth, and Amargosa Creek.

Take: Take would be allowed outside the conservation areas. This is expected to consist of small tributaries of Amargosa Creek near Palmdale.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Require 200' setback from Mojave River and Amargosa Creek. Large-scale developments in Palmdale could preserve this species within open space.	Continue restoration and monitoring at Camp Cady and Afton Canyon. Conduct surveys of Kelso Creek and Jawbone-Butterbredt ACEC.	Adjust setback based on research results. If turtles are found, establish setback. Exclude cattle from occupied habitat.	Riparian birds. Mojave River vole.

Discussion: The management program addresses the threats by:

- providing nesting areas adjacent to the wetlands with the 200' buffer.

PART C
COVERED BIRDS

BENDIRE'S THRASHER (*Toxostoma bendirei*)

Status: Federal: None California: Species of Special Concern
Date of Evaluation: March 27, 1998 FWS Ventura Field Office
Attendees: LaPré, Black, Bransfield (briefly), Pereksta, Haigh

Findings

Habitat: This species breeds in desert areas containing cactus, Mojave yuccas, and Joshua trees.

Current Distribution: The planning area comprises a small portion of the total range, which extends east to the east Mojave and Arizona. The historical range in the West Mojave was considerably larger, and the occupied habitat now consists of six disjunct populations.

Six populations are now known in the planning area: 1)Yucca Valley, where 38.5% of the land is managed by BLM, 2) Celso Valley (49% BLM), 3) Coolgardie Mesa (69% BLM), 4) Joshua Tree National Park, 5) SE Apple Valley (>99% private) and 6) N. Lucerne Valley (89% BLM).

A substantial amount of private land within the Yucca Valley population is owned and protected by The Wildlands Conservancy. The remaining San Bernardino County private lands are zoned for minimum 40 acre lot size, which is generally compatible with

Bendire's thrasher conservation. Some undeveloped habitat remains within the Yucca Valley city limits. Hillside Reserve (40 acre minimum lot size) is considered compatible zoning within the city. In addition, lands owned by the UC Burns Reserve and The Wildlands Conservancy within the city limits are conserved.

The Kelso Valley population is within an ACEC. Ranching operations are compatible with conservation of the Bendire's thrasher. Access within the ACEC is controlled by the BLM, and one side of the primary access road is fenced.

Threats: Identified threats include rural and urban development, off-road vehicle activity during the nesting season, and removal of yuccas and cholla cacti. Grazing has shown both positive and negative effects on this species. Fragmentation of the small remaining populations is a serious long-term threat.

Rural housing has already fragmented stands of prime habitat containing cacti and Joshua trees in SE Apple Valley, and this pattern of development is expected to expand slowly over the term of the permit. Although not all of the land will be developed, the integrity of the habitat will be lost to fragmentation, and thrasher numbers are expected to decline below a viable population level.

In northern Lucerne Valley, 52% of the habitat is included within the sphere of influence of the Town of Apple Valley. Very little development is now present, but rural housing is expected to occupy private lands within the sphere over the long term.

No threats to the habitat on Coolgardie Mesa have been identified. The habitat within JTNP is adequately protected.

Current Management: Long-term commitment to conservation is provided by Joshua Tree National Park, the University of California's Burns Reserve, and Wildlands Conservancy lands. Most of the defined habitat outside of the Park is located on private land and not subject to long-term conservation of the species.

Identified Shortfall: There is a need for additional population data on which to base future possible land acquisitions. Extensive surveys conducted in the past and used to define significant habitat have not been updated.

Biological Goals

Protect five of the six known populations: Yucca Valley, Kelso Valley, Coolgardie Mesa, JTNP, and northern Lucerne Valley. Prevent fragmentation of these habitats. Provide connectivity of open space between JTNP and Yucca Valley.

Authorized Take

Estimation of take: 3,973 acres. Rural development in SE Apple Valley may result in the loss and fragmentation of the small resident population over the term of the permit. Assuming that 5% of the habitat in San Bernardino County, including the Apple Valley sphere of influence is developed, 703 acres of private land would be converted. In northern Lucerne Valley, using the same assumption, 74 acres of habitat could be converted. A portion of the JTNP population extends north into Twentynine Palms. An estimated 411 acres of occupied habitat could be developed during the term of the permit. Habitat loss within the Yucca Valley city limits is estimated at 2,785 acres.

Conservation Strategy

Recommend that public lands be consolidated in the northern part of Yucca Valley population and in the Kelso Valley through land exchanges. BLM lands should be retained within Yucca Valley city limits. Retain BLM lands within Apple Valley sphere of influence. Private lands should be purchased on Coolgardie Mesa.

Suggest consolidating public lands in the Yucca Valley-JTNP corridors or zone for lot size $\geq$ 40 acres.

OHV use on public lands within conserved areas should be limited to designated roads.

Amend the Jawbone-Butterbredt ACEC management plan to include protections and monitoring specifically addressing the Bendire's thrasher.

Restrict vegetation harvesting, especially of cactus and yucca within conserved areas and the Yucca Valley-JTNP corridors.

Development projects in Kelso Valley and Yucca Valley within the conservation areas should retain Joshua trees, Mojave yuccas, and cactus as feasible. Large lot zoning (20 to 40 acre minimum) and/or density transfer is encouraged.

Monitor all protected populations. Monitoring can be habitat-based, using topography and vegetation as habitat parameters. A census of population numbers is needed for all conserved areas to establish baseline numbers. Require annual reporting by San Bernardino County, Kern County, and the cities of Yucca Valley and Twentynine Palms on development approvals within the conserved habitats. Require annual reporting by San Bernardino County and the Town of AppleValley for development approvals within the take areas. Conduct searches for Bendire's thrasher in the Yucca Valley-JTNP corridors.

Summary of land uses within habitat polygons

Population	Total Acreage	Developed	Acres Conserved	Acres of Take
Yucca Valley	77,273	2,785	71,703	2,785
Kelso Valley	16,273	0	16,273	0
Coolgardie Mesa	11,070	0	11,070	0
Joshua Tree NP	105,394	0	104.983	411
SE Apple Valley	14,065	1,081	12,282	702
Northern Lucerne Valley	11,440	0	11,366	74
Totals	235,515	3,866	227,677	3,973

Permit Compliance Summary

Goal: Protect five unfragmented disjunct populations. Protect corridors between Yucca Valley and Joshua Tree National Park.

Take: 3,973 acres. 776 acres in San Bernardino County, 411 acres in Twentynine Palms, 2,785 acres in Yucca Valley.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Large lot zoning. Retain BLM lands within Apple Valley sphere. Retain BLM lands within Yucca Valley city limits. Purchase private lands. Route designation. Prohibit vegetation harvesting. Establish local ordinances for retention of habitat within large lots.	Establish baseline numbers for all conserved populations. Report annual loss of habitat in take areas.	Adjust conservation area boundaries. Create mitigation bank or apply density transfers.	Burrowing owl. Little San Bernardino Mountains gilia. LeConte's thrasher. Desert tortoise. Mohave ground squirrel.

Discussion: The management program addresses the threats by:

- minimizing rural development with lot size restrictions.
- minimizing urban development by retention of BLM lands within the Apple Valley sphere of influence and Yucca Valley city limits.
- retaining key habitat components by prohibiting vegetation harvesting on public lands within conserved areas and establishing development standards for large lots on private lands.
- eliminating disruption of nesting by designation of routes of travel.
- preventing fragmentation of habitat with consolidation of public lands on Coolgardie Mesa, Yucca Valley and Kelso Valley.

This strategy generally meets the objectives of the permit applicants by permitting development within the cities and their spheres. However, retention of BLM lands as habitat in northern Lucerne Valley excludes 5,703 acres of the Apple Valley sphere of influence from development.

The management and acquisition program results in the retention of 95% of the existing occupied habitat. A key result is prevention of fragmentation of the small habitat patches. Up to 13,000 acres of habitat consolidation could be achieved by land exchanges between the BLM and landowners. The purchase of 3,390 acres of private (Catellus) lands offsets some take of private lands and prevents fragmentation of the habitat patch on Coolgardie Mesa. Designation of routes of travel and closing of unnecessary roads will constitute habitat enhancement because disturbance of nesting sites will be reduced or eliminated. Prohibition of harvesting of yuccas and cacti will preserve key habitat components. Connectivity of the habitat patches in Yucca Valley and Joshua Tree National Park will enhance interchange between the populations.

Without minimization and mitigation measures, four of the six habitat patches would become fragmented and unsuitable for the thrasher over the term of the permit. Taken as a whole, the anticipated take (3,973 acres of private lands) is fully mitigated by preventing fragmentation of the five conserved areas and applying management beneficial to the Bendire's thrasher. The mitigation, purchase of 3,390 acres of private (Catellus) lands, is roughly proportional to the take (3,973 acres of private lands).

FERRUGINOUS HAWK (*Buteo regalis*)

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: Ferruginous hawk may be found throughout the West Mojave in winter, but prefers agricultural areas where prey is relatively abundant.

Current Distribution: Ferruginous hawk is relatively abundant in winter in the Antelope and Mojave Valleys, and is occasional elsewhere, such as at Mojave Narrows Regional Park.

Harper Dry Lake has been identified by the BLM as a Key Raptor Area for ferruginous hawk.

Threats: Electrocution on electric transmission and distribution lines is a potential problem. Shooting remains a minor threat.

Current Management: Long-term conservation is provided at:

- Harper Dry Lake and Big Morongo Canyon Preserve ACECs; Coso Range, Darwin Falls and Sacatar Trail wilderness areas;
- King Clone and West Mojave Desert ecological reserves;
- Antelope Valley Poppy Reserve, Red Rock Canyon, Ripley Desert Woodland, and Saddleback Butte State parks;
- Joshua Tree National Park
- Camp Cady Wildlife Area.

BLM requires anti-perching devices on new and upgraded power poles as a condition of authorizing a right-of-way on public land.

Identified Shortfall: Data base to help define key raptor areas has not been maintained. Electrical transmission and distribution lines do not meet raptor-safe standards.

Biological Goals

Maintain wintering habitat. Prevent electrocution.

Authorized Take

No take of individuals should be allowed. Limited take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Recommend that all construction of new electric utility lines be raptor-safe. The most important aspect is the spacing of the conductors, which should be greater than 6 feet (1.83 m), especially on poles with single crossbars. In addition, conductors can be insulated on corner and transformer poles. An alternative approach is the provision of perch guards to prevent perching on unsafe poles, or artificial perches above the conductors, which allow a safe landing place for eagles and large hawks. Existing electrical transmission and distribution lines located near regular ferruginous hawk wintering areas can be retrofitted to meet current design standards which prevent electrocution.

The BLM's Key Raptor Area database should be updated by conducting the periodic (5 year intervals) monitoring specified in the nationwide plan for raptors on public lands.

Retain agricultural zoning in the western Antelope Valley and Mojave Valley.

Permit Compliance Summary

Goal: Maintain wintering habitat. Prevent of electrocution.

Take: No take of individuals should be allowed. Limited take of foraging habitat should be allowed throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Require raptor-safe electric lines. Maintain agricultural zoning.	Monitor hawk numbers at Harper Dry Lake, and in the Mojave and Antelope Valleys. Identify problem electrical towers.	If numbers decline, determine threats and take corrective action if problem stems from wintering habitat. Retrofit problem electrical towers.	Mountain plover.

Discussion: The management program addresses the threats by:

- eliminating the threat of electrocution by raptor-safe construction of new electric transmission and distribution lines.

- providing a continuation of use of the wintering habitat.

GOLDEN EAGLE (*Aquila chrysaetos*).

Status: Federal: None California: Fully Protected, Species of Special Concern
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: Rugged and remote mountain ranges for nesting; forages over open desert in a range approaching 100 square miles.

Current Distribution: Golden eagle is widespread in mountainous areas of the planning area. The Argus Mountains are an important location for golden eagles. Within the China Lake NAWS Mojave B Range, the Eagle Crags provide outstanding habitat for golden eagle. The southern Sierra Nevada Mountains contain several golden eagle nest sites.

Where development has encroached on historical nesting sites, golden eagles sometimes make new nests on electrical transmission lines, as in Adelanto.

Threats: Few threats are known to the West Mojave populations of golden eagle. Protective management is in place at China Lake NAWS, and many of the nest sites are within Wilderness (e.g. Newberry Mountains, Owens Peak, Kiavah, Sacatar Trail). However, human disturbance at certain nest sites is a threat, and new mining projects occasionally threaten selected nest sites of golden eagle. Shooting remains a minor threat

Electrocution of golden eagles on electric transmission and distribution lines is a continuing problem.

Current Management: A nearly complete database of nest sites was established in 1978-1979 by the BLM. BLM has identified Key Raptor Areas at Red Mountain-El Paso Mountains and the Ord-Newberry Mountains for golden eagle. BLM requires anti-perching devices on new and upgraded power poles as a condition of issuing a right-of-way on public land.

Take is prohibited by the Fish and Game Code provisions governing fully protected

species. Take is also restricted by federal law (50CFR 22.25), and a permit is required prior to eliminating a nest site.

Long-term commitment to conservation is provided within the following designated areas:

- Afton Canyon, Big Morongo Canyon Preserve, Great Falls Basin , Harper Dry Lake, Jawbone/Butterbredt, and Rainbow Basin ACECS;
- Bright Star, Coso Range, Darwin Falls, El Paso, Golden Valley, Grass Valley, Kiavah, Argus Mountains, Owens Peak, and Sacatar Trail wilderness areas;
- Antelope Valley Poppy Reserve, Red Rock Canyon State Park, Ripley Desert Woodland, Saddleback Butte State Park, Camp Cady Wildlife Area;
- Indian Joe Spring, King Clone, West Mojave Desert ecological preserves; and
- Joshua Tree National Park.

Identified Shortfall:. The BLM inventory of nest sites has not been maintained. Many utility lines do not meet raptor-safe standards. Certain nest sites face encroachment or disturbance from development, mining, or vehicles.

Biological Goals

Preserve all nest sites. Maintain the baseline number of territories.

Authorized Take

No take of individuals should be allowed. Unavoidable take of active nest sites should occur in the non-nesting season. Take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Recommend that development projects stay 1/4 mile away from occupied nests where possible, unless the line-of-sight from the edge of development is obscured. No construction or disturbance within 1/4 mile of nest sites during the nesting season.

The following recommendations, developed for the prairie falcon, should be applied to golden eagle sites. Blasting should be avoided within 410 feet of occupied aeries and peak noise levels must not exceed 140 decibels at the aerie. No more than three blasts should take place on a given day nor more than ninety blasts during the nesting season.

All construction of new electric utility lines should be raptor-safe. The most important aspect is the spacing of the conductors, which should be greater than 6 feet (1.83 m), especially on poles with single crossbars. In addition, conductors could be insulated on corner and transformer poles. An alternative approach is the provision of perch guards to prevent perching on unsafe poles, or artificial perches above the conductors, which allow a safe landing place for eagles. Existing electrical transmission and distribution lines located within golden eagle territories could be retrofitted to meet current design standards which prevent electrocution.

Update the BLM's Key Raptor Area database by conducting the periodic (5 year intervals) monitoring specified in the nationwide plan for raptors on public lands.

Establish a new Key Raptor Area encompassing the Argus Mountains.

Purchase inholdings within designated Wilderness. The proposed BLM/Wildlands Conservancy acquisition would consolidate federal lands in the Newberry Mountains Wilderness.

Establish the Middle Knob ACEC, which would offer additional protection for eagle nests at that location.

Permit Compliance Summary

Goal: Preserve all nest sites. Maintain the baseline number of territories.

Take: No take of individuals should be allowed. Unavoidable take of active nest sites must occur in the non-nesting season. Take of foraging habitat should be allowed throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Maintain 1/4 mile buffer from nest sites. Require raptor-safe electric lines. Observe blasting restrictions. Establish a new Key Raptor Area encompassing the Argus Mountains. No construction or disturbance within 1/4 mile of nest sites during the nesting season.	Conduct surveys to determine current activity at all nests present in 1979. Compile record of electrocutions. Update Key Raptor Area database.	Identify threats, if any, to selected nest sites and take corrective actions. Retrofit problem electrical towers.	Bighorn sheep. Inyo California towhee. Prairie falcon.

Discussion: The management program addresses the threats by:

- minimizing human disturbance at nest sites through seasonal closure of access roads at selected sites.
- minimizing potential conflicts by acquiring private lands within Wilderness.
- eliminating the threat of electrocution by raptor-safe construction of new electric transmission and distribution lines.

This strategy generally meets the objectives of the permit applicants by application of uniform mitigation requirements for projects affecting birds of prey.

INYO CALIFORNIA TOWHEE (*Pipilo crissalis eremophilus*)

Status: Federal: Threatened California: Endangered
Date of Evaluation: None

Findings

The Inyo California towhee is a narrow endemic whose range is almost entirely within the planning area. The Service has prepared a Recovery Plan and critical habitat has been designated. In 1998, an extensive survey of the entire range of this bird was conducted, and the findings were made available after the evaluation meetings were completed.

Habitat: The Inyo California towhee nests near riparian vegetation, including very small springs and seeps, and forages in mixed Mojave desert scrub. It ranges from 2680 feet to 5630 feet in elevation. All towhee sightings have been within 700 yards of a water source.

Current Distribution: This bird is restricted to the southern half of the Argus Range in Inyo County. The extent of occupied habitat has been estimated at 24,176 acres. This figure does not include mountainous areas between nesting territories that may be used for dispersal or in the non-nesting season.

Two thirds of the range of the Inyo Calilfornia towhee falls within the boundaries of the China Lake NAWS. Current management is compatible with conservation of this bird, and the Resources Management Plan for the base will address conservation of this species. The remaining one third of the range is managed by BLM and the California Department of Fish and Game. These agencies have established the Great Falls Basin ACEC, the Argus Mountains Wilderness, and the Indian Joe Canyon Ecological Reserve.

The 1998 survey and census of the Inyo California towhee detected a total of 640 adult towhees, representing 317 breeding pairs and 23 single adults.

Threats: Destruction and degradation of habitat by feral burros and horses is a primary threat. Other potential threats include cattle grazing, off-highway vehicle activities, mining, and encroachment by rural residents.

Water exportation from occupied springs (Bainter Spring, Alpha Spring, Benko Spring, North Ruth Spring #3) is a current threat or potential threat.

Invasive exotic plants are present at some water sources used by towhees. These plants can displace native species, reducing the quality of the nesting habitat.

Trespass camping and hunting on China Lake NAWS near Benko Spring and North Ruth Spring may impact the birds and their habitat.

Current Management: Long-term commitment to conservation is provided at Indian Joe Spring Ecological Reserve, Great Falls Basin ACEC , and Argus Mountains Wilderness. Management actions have included removal of burros and horses; withdrawal of public land from mining (Argus Wilderness), acquisition of private land at Little Joe Spring; closure of motorized vehicle routes; and ongoing protection of water sources.

Identified Shortfall: Unresolved water diversion problems, and inadequate protection of water sources located within the China Lake NAWS from feral and domestic animals.

Biological Goals

Protect a viable population on public and military lands large enough to meet the Recovery Plan criteria for delisting. The Recovery Plan calls for delisting when the population has been sustained at a minimum level of 400 individuals for a five year period.

Authorized Take

Take should be allowed on private land at the edge of the towhee's range, such as at Crow Canyon. Less than 2% of the occupied habitat of the towhee is on private lands.

Conservation Strategy

Continue removal of feral burros from the Argus Mountains with a goal of zero (BLM and China Lake NAWS).

Reduce the wild horse population in Upper North Homewood Canyon, North Fork Water Canyon, and the upper portion of Side Canyon B of Water Canyon (all on China Lake NAWS).

Cease diversion of water at Benko Spring and North Ruth Spring #3 (within China Lake

NAWS). Determine legality and effect of water diversions at Alpha Spring and Bainter Spring and cease diversion if necessary. Secure water rights at all springs in Argus Mountains.

Exclosure fencing should be installed around springs at 12 designated sites (9 on China Lake NAWS and 3 on BLM lands). These sites should include the following:

- Site #1 in the canyon north of Sweetwater Wash.
- Site #1 in the canyon west of North Wilson Canyon.
- Sites #1 and #2 in the canyon east of North Wilson Canyon.
- Sites #6, #7, and Moscow Spring in the Moscow Spring complex.
- Site #9 of Side Canyon B of Homewood Canyon.
- Site #1 in Crow Canyon.
- Coyote Spring.
- Site #10 in Shepard Canyon.
- "Faultline" Springs.
- North Ruth Spring.
- Peach Spring.
- Sidehill Spring.

Remove salt cedar and *Phragmites* at designated springs and replant with native willows.

Install vehicle barriers at Christmas Spring, Nadeau Spring, North Ruth Spring, and Austin Spring. These BLM sites are disturbed by vehicle tracks and camping, and a method of directing the use away from the riparian vegetation must be devised.

Install signs indicating the China Lake NAWS boundary at Benko Spring and Ruby Spring.

Conduct surveys throughout the range of the Inyo California towhee every five years.

Permit Compliance Summary

Goal: Protect a viable population on public lands large enough to meet the Recovery Plan criteria for delisting.

Take: Take should be allowed on private land at the edge of the towhee's range. If all private lands were approved for incompatible development, at most two nesting pairs of towhees would be affected.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Protect water sources. Remove feral burros. Remove wild horses. Restrict vehicle and camping access near accessible occupied springs.	Conduct annual censuses to determine if Recovery Plan goals are met. Evaluate water diversions at New House Spring and Tennessee Spring. Monitor spread of tamarisk and *Phragmites*	If goals are met, initiate delisting. Secure water rights. Remove tamarisk and *Prhagmites* as necessary.	Golden eagle. Panamint alligator lizard. Prairie falcon. Long-eared owl. Townsend's big-eared bat.

Discussion: The management program addresses the threats by:

- enhancement of the springs and seeps through removal of feral burros, removal of tamarisk and *Phragmites*, and removal of water diversions.
- restricting vehicle and camping access near accessible occupied springs.
- encouraging recovery of riparian vegetation by fencing selected springs.

The anticipated take is very small and is fully mitigated by application of proactive and remedial management measures on public and military lands. The delisting goal of the Recovery Plan for number of birds was attained in 1998, a year of above-average rainfall. Habitat improvements may allow the towhees to recover sufficiently so that this population size can be maintained in dry years.

LECONTE'S THRASHER (*Toxostoma lecontei*)

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 8, 1998 BLM Desert District Office, Riverside
Attendees: LaPré, Black, Pereksta, Haigh (briefly), Thompson, Jones, Davis

Findings

Habitat: Creosote bush scrub with stands of cholla cactus, Joshua trees, and thorny shrubs.

Current Distribution: LeConte's thrasher is widespread throughout the planning area, favoring areas of cacti, Joshua trees, and desert washes. It is absent from playas and

mountainous areas.

Threats: The primary threat is loss of habitat and fragmentation of habitat into segments too small to support a viable population in the long term.

LeConte's thrashers are sensitive to vehicle traffic during the nesting season, especially off-road travel in washes.

Current Management: Long-term conservation is provided by Joshua Tree National Park and a number of other ACECs, wilderness areas, and state parks. Within the broader range of this species, a lesser level of conservation is provided on BLM land designated "Limited" (Multiple-Use Class "L"), and within category I and II desert tortoise habitat in which sheep grazing has been discontinued.

Identified Shortfall: Need to reduce motorized vehicle access on public land throughout the range of the species, especially in washes during nesting.

Biological Goals

Conserve a large area capable of supporting viable populations in perpetuity. Outside the primary conservation area, the goal is maintenance of viable populations at all edges of its range.

Authorized Take

Take should be allowed within all planning area city limits and in all County areas outside the tortoise DWMAs. Development on county lands outside the DWMAs is estimated as 5% of the private lands. Within the DWMAs, a cap of 1% of the land area should limit the acreage of take.

Conservation Strategy

A large conservation area corresponding to that of the desert tortoise should be created.

Catellus Development Corporation lands should be acquired within the primary conservation zone. The BLM/Wildlands Conservancy proposal will acquire approximately 45,000 acres.

Reduce off-road vehicle routes within the conservation zone and on BLM lands that are known habitat for LeConte's thrasher.

Create an open space corridor between the San Bernardino Mountains and the Granite Mountains. This measure, also proposed for maintenance of dispersal habitat for bighorn

sheep, would include considerable acreage of high-quality LeConte's thrasher habitat.

Record all sightings of LeConte's thrashers when conducting biological studies for other species, e.g. desert tortoise. Compilation of sightings in the West Mojave GIS database has been an effective method of defining occupied habitat and establishing locations of the densest populations. Utilization of these data in the future may better define specific areas where more intensive vehicle management (route designation, law enforcement) is needed and where vehicle restrictions could be relaxed.

Permit Compliance Summary

Goal: Conserve a large area capable of supporting viable populations in perpetuity. Outside the DWMA, maintain viable populations at all edges of its range.

Take: Take should be allowed within all city limits and in all areas outside the DWMA. Within the DWMA, a cap of 1% of the land area should limit the acreage of take.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Reduction of off-road vehicle routes throughout the range. Acquire lands within conservation zone.	Continue compilation of records in West Mojave database.	Adjust boundaries of DWMA. Adjust route designations.	Bendire's thrasher. Desert tortoise. Mohave ground squirrel. Barstow woolly sunflower.

Discussion: The management program addresses the threats by:

- minimizing disturbance in occupied habitat through reduction of road network.
- creation of a large, central conservation area unfragmented by rural and urban development.

This strategy generally meets the objectives of the permit applicants by allowing development to proceed within city limits.

Without minimization and mitigation measures, habitat for LeConte's thrasher would continue to become fragmented with the potential for conservation of a large, contiguous habitat to be lost.

The anticipated take within cities and the 5% estimate of take in rural county areas is fully mitigated by creation of a very large central conservation area capable of supporting the

species in the long term. LeConte's thrashers would also be conserved within Edwards Air Force Base, Joshua Tree National Park, and areas conserved for Bendire's thrasher.

LONG-EARED OWL (*Asio otus*)

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: Riparian groves of willows and cottonwoods, stands of oaks in desert mountains, and dense stands of junipers are the preferred nesting habitat in the California desert. The long-eared owl disperses widely and can migrate long distances, and appears to exhibit low nest site fidelity. Therefore, protection of the woodland habitat is more important than protection of individual nest sites.

This species often roosts communally in the winter, preferring dense stands of trees, even plantings near human habitation.

Current Distribution: Long-eared owl has been found in several locations in the Argus Mountains, and is known to nest at the largest riparian sites in the West Mojave, including Big Morongo Reserve and Mojave Narrows Regional Park. Other recorded sites, presumably for nesting birds, are Leona Valley near Elizabeth Lake, and several sites near Lancaster. Communal winter roosts have been detected at Harper Dry Lake. An abundance of potential nest and roost sites are possible in the West Mojave; more specific information is needed on local distribution of this widespread species.

Threats: Flood control projects can impact or convert riparian habitat. Shooting remains a minor threat.

Current Management: Long-term conservation is provide at:

- Harper Dry Lake, Afton Canyon, Big Morongo Canyon Preserve, Sand Canyon, Jawbone/Butterbredt, Short Canyon, and Desert Tortoise Natural Area ACECs;
- Bright Star, Coso Range, Darwin Falls, El Paso Mountain, Golden Valley, Kiavah, Owens Peak, Sacatar Trail, and Grass Valley wilderness areas;
- Red Rock Canyon State Park;
- Indian Joe Springs Ecological Reserve

- Joshua Tree National Park.

Identified Shortfall: Data base to help define key roosting/nesting areas has not been maintained. Population trends are poorly known.

Biological Goals

Preserve all nest sites and communal roosts.

Authorized Take

No take of individuals should be allowed. Take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Recommend that development projects stay 1/4 mile away from occupied nests, unless the line-of-sight from the edge of development is obscured. No construction or disturbance should be allowed within 1/4 mile of nest sites during the nesting season.

Establish a new Key Raptor Area encompassing the Argus Mountains for the long-eared owl. Conduct monitoring at five year intervals and report to the national raptor database.

Permit Compliance Summary

Goal: Preservation of all nest sites and communal roosts.

Take: No take of individuals should be allowed. Take of foraging habitat should be allowed throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Maintain 1/4 mile buffer from nest sites. Avoid construction within 1/4 mile of nests during nesting season.	Conduct periodic censuses at Argus Mountains, Mojave Narrows Park, Big Morongo ACEC.	Protect newly discovered nest and communal roost sites.	Bighorn sheep. Inyo California towhee. Riparian birds.

Discussion: The management program addresses the threats by:

- minimizing human disturbance at nest sites.

MOUNTAIN PLOVER (*Charadrius montanus*)

Status: Federal: Proposed as Threatened
California: Species of Special Concern
Date of Evaluation: April 8, 1998 BLM Desert District Office, Riverside
Attendees: LaPré, Black, Pereksta, Haigh (briefly), Thompson, Jones, Davis

Findings

Habitat: Mountain plovers do not nest within the planning area.

Mountain plovers are found almost exclusively in plowed or burned agricultural fields in winter. Original, ancestral wintering habitat is not well defined, but is though to be edges of playas with short ground cover, such as alkali sink scrub.

Current Distribution: Mountain plovers are found in relatively limited portions of the agricultural area in western Antelope Valley near the Kern - Los Angeles County line. They have also been recorded at Harper Dry Lake, primarily in the fallow agricultural fields. Potential habitat exists along the Mojave River near Helendale and in the Mojave Valley.

Threats: Threats are unknown in wintering areas. Exposure to pesticides is a possible, but unproven threat. Loss of native habitat is believed to be a threat.

Current Management: Long-term conservation on public lands is provided by the Harper Dry Lake ACEC. Actions to conserve habitat on private lands have not been provided.

Identified Shortfall: Lack of information on threats to the wintering habitat, fidelity to specific agricultural areas, and use of natural playas.

Biological Goals

Maintain and enhance wintering habitat.

Authorized Take

There should be no take of individuals. Limited take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Current agricultural zoning should be maintained in the western Antelope Valley and

Mojave Valley.

Continue monitoring of wintering populations to determine site fidelity of wintering plovers and to estimate the significance of the West Mojave populations to the species as a whole.

Adaptive management will be important for this species, as more is learned of the threats to West Mojave habitat. Continuing consultation with the Service is recommended. At a minimum, there should be annual meetings to review the adequacy of management measures. These meetings should take place after the annual monitoring is completed.

Permit Compliance Summary

Goal: Maintenance and enhancement of wintering habitat.

Take: No take of individuals. Limited take of foraging habitat should be allowed throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Maintain agricultural zoning.	Census plover numbers at Harper Dry Lake, and in the Mojave and Antelope Valleys.	If site fidelity is high, target those areas for continuation of agricultural uses.	Ferruginous hawk. Northern harrier. Short-eared owl.

Discussion: The management program addresses the threats by:

- providing a continuation of use of the agricultural wintering habitat.

NORTHERN HARRIER (*Circus cyaneus*)

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: Northern harrier can be found throughout the West Mojave in the winter, although it is most frequently seen near agricultural areas and seasonal wetlands. Nesting sites are limited to locations with year-round marsh habitat or, in wet years, areas with wetlands persisting throughout the nesting season.

Current Distribution: Northern harrier appears to nest on Edwards AFB at Piute Ponds. Harper Dry Lake is an important wintering area, and has been identified by the BLM as a Key Raptor Area for northern harrier.

Threats: Insufficient water supply to permanent and seasonal wetlands is a problem in many areas, including Harper Dry Lake. Shooting remains a minor threat.

Current Management: Long-term conservation of nesting sites is limited to Harper Dry Lake ACEC and Piute Ponds located on Edwards AFB. Long-term conservation forwintering birds is provided potentially at a number of riparian ACECS and within designated wilderness areas located in the West Mojave region.

Identified Shortfall: Lack of dependable source of water on Harper Dry Lake. Inventory of nesting sites has not been maintained.

Biological Goals

Preserve all nest sites. Maintain and enhance wintering habitat.

Authorized Take

No take of individuals should be allowed. Take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Recommend no construction or disturbance within 1/4 mile of nest sites during the nesting season.

Suggest that a permanent water supply be obtained to the marshes at Harper Dry Lake ACEC.

BLM's Key Raptor Area database should be updated by conducting the periodic (5 year intervals) monitoring specified in the nationwide plan for raptors on public lands.

Permit Compliance Summary

Goal: Preservation of all nest sites. Maintenance and enhancement of wintering habitat.

Take: No take of individuals should be allowed. Take of foraging habitat should be allowed throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Maintain 1/4 mile buffer from nest sites. No construction or disturbance within 1/4 mile of nest sites during the nesting season.	Periodically census nesting and wintering numbers at Harper Dry Lake and Piute ponds.	If threats to nest sites arise, take corrective action, such as limiting access.	Short-eared owl. Snowy plover.

Discussion: The management program addresses the threats by:

- minimizing human disturbance at nest sites.

PRAIRIE FALCON (*Falco mexicanus)*

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: The prairie falcon is found throughout the West Mojave, although it generally avoids urbanized areas. Nests are located on cliffs in rugged mountain ranges, often within ½ mile of a water source. Mountain ranges near agricultural areas also are favored because of increased prey density near nest sites.

In winter, birds disperse widely, and are joined by migratory birds from northern latitudes.

Current Distribution: Prairie falcons are widespread in mountainous areas of the planning area.

Threats: Human disturbance at certain prairie falcon nest sites is a threat. New mining projects occasionally threaten selected nest sites of prairie falcon.

Robbing of nest sites for falconry was a threat in the past, but availability of captive-raised birds has virtually eliminated this problem.

Urbanization surrounding an historical eyrie gradually degrades the foraging habitat and increases disturbance at the nest site. One of the known nest locations for prairie falcon at Lovejoy Butte is no longer occupied for these reasons.

Current Management: A nearly complete database of nest sites was established in 1978-

1979 by the BLM. Key Raptor Areas have been identified by the BLM, in the Red Mountain-El Paso Mountains and the Ord-Newberry Mountains. Long-term commitment to conservation is provided within the following designated areas:

- Great Falls Basin, Trona Pinnacles, Jawbone/Butterbredt, Cronese Lakes and Rainbow Basin ACECS;
- Black Mountain, Newberry , Rodman, Coso Range, Darwin Falls, El Paso, Argus Mountains wilderness areas, and Cady Mountains wilderness study area;
- Antelope Valley Poppy Reserve, Red Rock Canyon State Park, Ripley Desert Woodland, Saddleback Butte State Park, Camp Cady Wildlife Area;
- Indian Joe Spring, King Clone, and West Mojave Desert ecological preserves
- Joshua Tree National Park.

Identified Shortfall:. BLM's inventory of nesting sites has not been maintained. Encroachment and disturbance, including vehicular access, near nesting sites should be further restricted especially during the nesting season. Target shooting is not restricted within a reasonable distance of nesting sites.

Biological Goals

Preserve all nest sites. Maintain the baseline number of occupied territories.

Authorized Take

No take of individuals should be allowed. Unavoidable take of active nest sites should occur in the non-nesting season. Take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Recommend that development projects stay 1/4 mile away from occupied nests, unless the line-of-sight from the edge of development is obscured. Recommend that no construction or disturbance be allowed near nest sites during the nesting season.

Blasting should be restricted near nest sites. Blasting should be avoided within 410 feet of occupied aeries and peak noise levels must not exceed 140 decibels at the aerie. No more than three blasts should take place on a given day nor more than ninety blasts during the nesting season.

Target shooting should not be allowed within ½ mile of nest sites.

Suggest restricting vehicle access at selected locations. BLM should enforce road closure where practical (e.g. Robber's Roost, Owl Canyon).

Update the BLM's Key Raptor Area database by conducting the periodic (5 year intervals) monitoring specified in the nationwide plan for raptors on public lands.

Establish a new Key Raptor Area encompassing the Argus Mountains.

Establish the Middle Knob ACEC, which would offer additional protection for prairie falcon nests at that location.

Permit Compliance Summary

Goal: Preservation of all nest sites. Maintain the baseline number of occupied territories.

Take: No take of individuals. Unavoidable take of active nest sites should occur in the non-nesting season. Take of foraging habitat should be allowed throughout planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Avoid nesting season. Maintain 1/4 mile buffer from nest sites. Restrict vehicle access at selected locations. Require raptor-safe electric lines. Observe blasting restrictions. Acquire private land within Wilderness.	Conduct surveys to determine current activity at all nests present in 1979. Update Key Raptor Area databases.	Identify threats, if any, to selected nest sites and take corrective actions.	Bighorn sheep. Inyo California towhee. Golden eagle.

Discussion: The management program addresses the threats by:

- minimizing human disturbance at nest sites through seasonal closure of access roads at selected sites.
- minimizing potential conflicts by acquiring private lands within wilderness.
- Imposing blasting restriction at mine sites near falcon nests.

This strategy generally meets the objectives of the permit applicants by application of uniform mitigation requirements for projects affecting birds of prey.

SHORT-EARED OWL (*Asio flammeus*).

Status: Federal: None California: Species of Special Concern
Date of Evaluation: April 2, 1998 BLM, Ridgecrest Field Office
Attendees: LaPré, Racine, Thompson, Jones, Pauli, Schlachter & Parker (briefly)

Findings

Habitat: Marshes and seasonal wetlands.

Current Distribution: Short-eared owl appears to nest on Edwards AFB at Piute Ponds. A large flock was observed in the winter at Cronese Basin ACEC in 1977.

Threats: Disturbance at nest sites is a threat.

Current Management: Long-term commitment to conservation is provide at the Harper Dry Lake ACEC (a key location in the West Mojave area); the Cronese Lakes and Jawbone/Butterbredt ACECs; the Antelope Valley Poppy Reserve, the Ripley Desert Woodland State Parks, and the Camp Cady Wildlife Area.

Identified Shortfall: Lack of dependable source of water on Harper Dry Lake. Inventory of nesting sites has not been maintained.

Biological Goals

Preserve all nest sites.

Authorized Take

No take of individuals should be allowed. Take of foraging habitat should be allowed throughout the planning area.

Conservation Strategy

Continue protective management of Piute ponds at Edwards AFB.

A permanent water supply to the marshes at Harper Dry Lake ACEC should be obtained.

Permit Compliance Summary

Goal: Preservation of all nest sites.

Take: No take of individuals should be allowed. Take of foraging habitat should be

allowed throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Avoid disturbance during nesting season. Maintain 1/4 mile buffer from nest sites. Obtain a permanent water supply to the marshes at Harper Dry Lake ACEC.	Conduct periodic nesting censuses at Piute Ponds and Harper Dry Lake. Monitor water levels at Harper Dry Lake.	If threats develop to nest locations, reduce disturbance, increase law enforcement. Obtain additional water source for marsh if necessary.	Snowy plover. Northern harrier.

Discussion: The management program addresses the threats by:

- minimizing human disturbance at nest sites.
- enhancement of nesting habitat at Harper Dry Lake.

WESTERN SNOWY PLOVER (*Charadrius alexandrinus*)

Status: Federal: None. Pacific Coast populations are Threatened
California: Species of Special Concern
Date of Evaluation: April 8, 1998 BLM Desert District Office, Riverside
Attendees: LaPré, Black, Pereksta, Haigh (briefly), Thompson, Jones, Davis

Findings

Habitat: The Western snowy plover nests in the West Mojave on certain playas and wetland areas. Most appear to depart for the winter, but migrants and wintering birds are known from a few localities. They favor playas, seasonal wetlands, and sewage treatment ponds or ponds managed for wintering waterfowl.

Current Distribution: Western snowy plover appears to nest with regularity on Edwards AFB at Piute Ponds. Other reported nest locations are Harper Dry Lake, Koehn Lake, China Lake, Rosamond Lake, Dale Lake, and the evaporation ponds at the Edison facility in Daggett, although the birds may not use these sites every year. Suspected nesting habitat is found along the shoreline at Searles Lake. All of these sites may be used by this bird in winter.

Threats: Nests are vulnerable to human disturbance, including vehicle traffic and pets.

Insufficient water supply to permanent and seasonal wetlands is a problem in many areas, including Harper Dry Lake. Rising water levels that inundate nests is a problem at

managed ponds and during exceptional wet years at natural playas.

Snowy plovers are very susceptible to predators, including ravens, coyotes, foxes, and feral dogs and cats.

Current Management: Long-term conservation provided at Cronese Lakes ACEC and Harper Dry Lake ACEC.

Identified Shortfall: Lack of dependable source of water on Harper Dry Lake. Lack of survey data on nesting sites in on public lands, particularly at Koehn, Dale, and Searles dry lakes.

Biological Goals

Preserve all nest sites. Maintain and enhance nesting and wintering habitat on public and military lands.

Authorized Take

Take should be allowed on private lands throughout the planning area. Development pressure on the playa edge nesting habitat is minimal and sometimes compatible, such as at the former Saltdale site.

Conservation Strategy

Because the current occupied nesting habitat for snowy plover is not well known, much of the conservation for this species will be a result of adaptive management.

Continue compatible management of Piute ponds at Edwards AFB.

Census populations at Koehn Lake, Searles Lake, China Lake, Cronese lakes, Dale Lake, and Harper Dry Lake to determine occupied nesting areas. If nesting populations are discovered, restrict human and vehicle disturbance for a distance of 1/8 mile from nest sites during the nesting season (April 1 - August 1).

Suggest that a permanent water supply be obtained to the marshes at Harper Dry Lake ACT.

Projects in nesting habitat should allow the birds to complete the nesting season before construction begins.

Permit Compliance Summary

Goal: Preservation of all nest sites on public land with protection from human disturbance.

Take: Take should be allowed on private lands throughout the planning area.

Minimization & Mitigation	Monitoring	Adaptive Management	Other Species
Maintain 1/8 mile buffer from nest sites. No construction or disturbance within 1/4 mile of nest sites during the nesting season.	Conduct periodic censuses of Dale, Koehn, and Searles lakes.	Close playa edges to vehicular traffic in spring if nest sites are located.	Short-eared owl. Northern harrier. Alkali mariposa lily.

Discussion: The management program addresses the threats by:

- minimizing human disturbance at nest sites.
- identifying the occupied habitat through monitoring

PART D
COVERED PLANTS

[Findings and recommendations of this part are currently being developed by the planning team, the Department and the Service. When completed, this material will be provided to the Supergroup. Plants which will be addressed include the following:

Alkali mariposa lily
Barstow woolly sunflower
Carbonate endemics
Clokey's cryptantha
Crucifixion thorn
Desert Cymopterus
Kelso creek monkeyflower
Lancaster milk vetch
Lane mountain milkvetch
Little San Bernardino Mountains gilia
Mojave monkeyflower
Mojave tarplant
Parish's alkali grass
Parish's phacelia
Pygmey Poppy
Salt Spring checkerbloom
Shockley's rock cress
Short-joint beavertail cactus
White-margined beardtongue]