Burrowing Owls

Although significantly degraded, agricultural lands within the City of Chino, including the Project Area, provide nesting and foraging habitat for the burrowing owl. If burrowing owls are discovered on a property proposed for development during the course of conducting a biological survey (see Section 4.3.2, Required Biological Surveys), the applicant/landowner shall follow the September 25, 1995 CDFG Staff Report on Burrowing Owl Mitigation (Appendix F) as supplemented by this RMP. If avoidance is feasible areas occupied by burrowing owls should not be disturbed within approximately 160 feet outside the breeding season (September 1 through January 31) and 250 feet during breeding season (February 1 through August 31). If avoidance is not feasible, provisions will be made to passively relocate the owls from the project site in accordance with the 1995 CDFG Staff Report. It should be noted that site conditions are expected to vary and that mitigation measures will need to be adapted to fit specific circumstances. While the primary focus will be on passive relocation, as required by CDFG, other optional approaches to mitigation may be considered if it can be demonstrated that they will benefit the burrowing owl.

As indicated, passive relocation as opposed to avoidance will be the preferred and probably the most practical mitigation measure since most of the land above the 566-foot inundation line is planned for development and avoidance is not expected to be possible. Relocated owls are intended to be accommodated within the 300-acre Conservation Area. Priority will be given to establishing an onsite Conservation Area that provides nesting and foraging habitat for burrowing owls, as well as foraging habitat for raptors, migratory birds, and waterfowl.

Table 4-6 provides a checklist for determining if burrowing owl mitigation measures are needed for a project site and presents a range of options for satisfying needed mitigation requirements.

TABLE 4-6
BURROWING OWL MITIGATION CHECKLIST

☐	A general biological and any required focus surveys for each development application shall determine if burrowing owls are nesting on the development site (see Section 4.3.2, Required Biological Surveys).
☐	If surveys confirm that the site is occupied by burrowing owls, mitigation measures to minimize impacts to burrowing owls, their burrows, and foraging habitat should be incorporated into subsequent, project-level CEQA documents as enforceable conditions. Projects and situations vary and mitigation measures should be adapted to fit specific circumstances.
☐	For sites occupied by burrowing owl, a report for the development project should be prepared for the City of Chino. The report should include the following information: – Date and time of visit(s) including name of the qualified biologist conducting surveys, weather and visibility conditions, and survey methodology; – Description of the site including location, size, topography, vegetation communities, and animals observed during visit(s); – Maps and photographs of the site; – Results of focused surveys for burrowing owls, including a map showing the location of all burrow(s) (natural or artificial) and owl(s), as well as the numbers at each burrow, if present, and tracks, feathers, pellets, or other items (e.g., prey remains, animal scat); – Behavior of owls during the surveys; and – Any historical information (Natural Diversity Database, Department region files/Breeding Bird Survey data, American Birds records, Audubon Society, local bird club, other biologists, etc.) regarding the presence of burrowing owls on the site.
☐	If avoidance is feasible[(1)], then no disturbance should occur within 50 meters (approximately 160 feet) of occupied burrows during the nonbreeding season of September 1 through January 31 or within 75 meters (approximately 250 feet) during the breeding season of February 1 through August 31.
☐	If avoidance is not feasible, passive relocation shall be employed; owls should be excluded from burrows in the immediate impact zone and within a 50-meter (approximately 160-foot) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) should be left in place 48 hours to ensure owls have left the burrow before excavation. Two natural or artificial burrows should be provided in the Conservation Area or within a City-approved Candidate Relocation Area for each occupied burrow that will be rendered biologically unsuitable by a given development project. The affected portion of the project site should be *monitored daily for one week* to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe should be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.
☐	Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either: 1) the birds have not begun egg-laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
☐	Pre-construction surveys of suitable habitat at the project site(s) and buffer zone(s) should be conducted within the 30 days prior to construction to ensure no additional burrowing owls have established territories since the initial surveys. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site should be resurveyed.
☐	When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 within the Conservation Area or a Candidate Relocation Area. One example of an artificial burrow design is provided in Exhibit 9.
Note:	[(1)] For the purposes of this Section "feasible" refers to location of nests in open space or other areas not proposed for development or other invasive use.

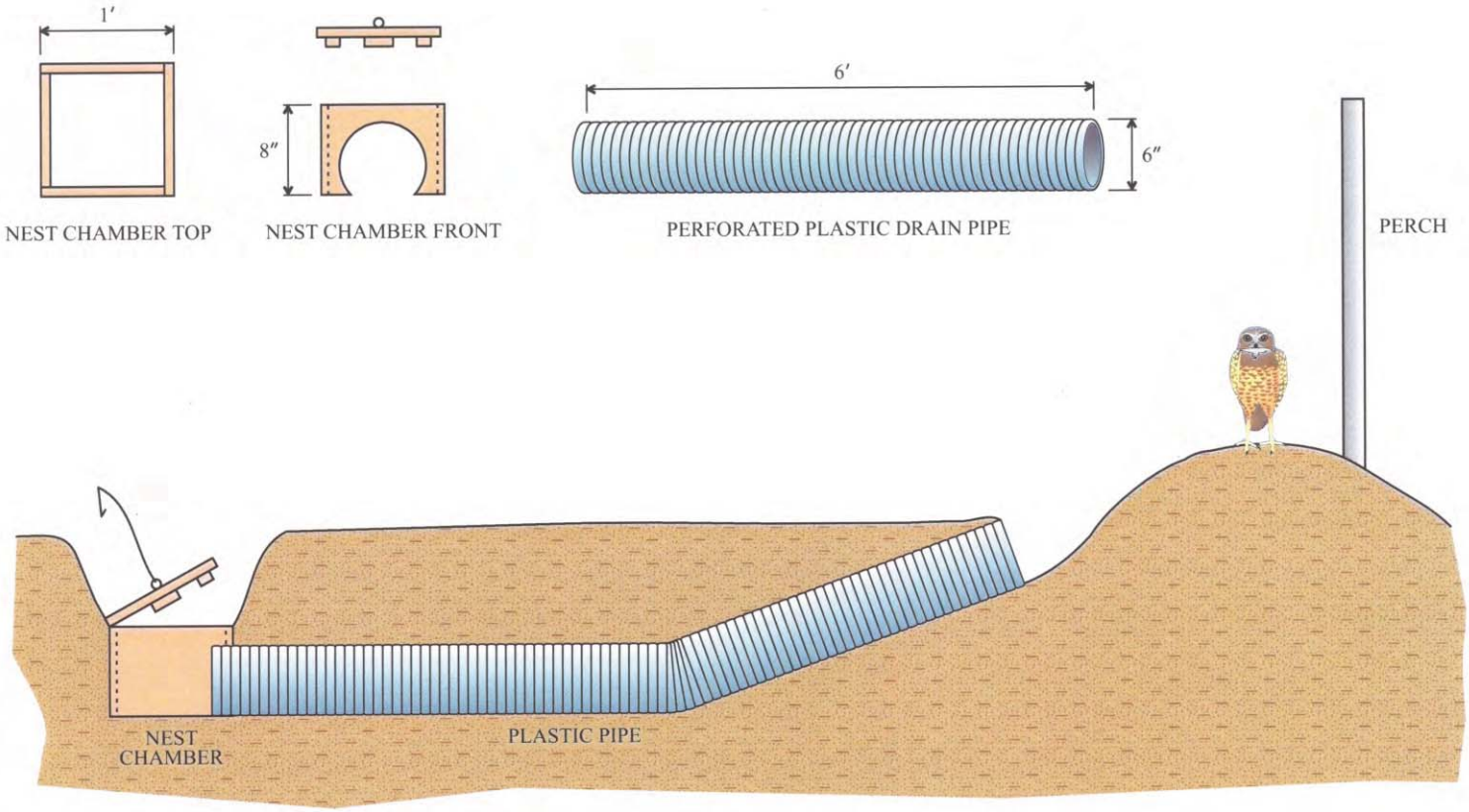

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Exhibit **9**

Artificial Nest Design for Burrowing Owls

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Active Relocation Option

The feasibility of establishing an active relocation program as an alternative relocation methodology may be considered by the City of Chino as one of the options available to an applicant/landowner if an active relocation area(s) can be successfully established and approved by CDFG. The Candidate Relocation Areas discussed above and shown on Exhibit 8 would be evaluated for their applicability as an active relocation site. An active relocation will require moving owls beyond their present territory into other areas within the Project Area. There have been successful active relocation programs in California and elsewhere in North America. An active relocation program in British Columbia succeeded in releasing 106 yearling owls between 1992 and 1997. The mean number of fledglings per successful pair was 4:1 (Leupin 2001). Another active relocation effort by P. Delevoryas (1997) in Santa Clara, California, relocated five pairs of burrowing owls during the courtship period; two pair bred, with one pair producing six nestlings.

Locally, P. Bloom, (personal communication 2002) cooperated with Seal Beach Naval Weapons Station (SBNWS) to establish an active relocation program. Approximately 30 owls have been relocated to this facility from project sites in the last 5 years and have resulted in 10 successfully fledged nestlings from captive breeding adults.

The process of actively relocating burrowing owls requires special federal permits as well as approval from CDFG and will be implemented only if determined to be feasible by the City or its designee in consultation with CDFG. If such an area can be established and permitted by the City of Chino for active relocation, it could be available if passive location is unavailable or unsuccessful for mitigating impacts to burrowing owls if they are discovered to be present on a particular project site. Appendix G details the steps that the City and project applicants would have to follow to establish such a site if they chose it as an optional implementation measure.

Contingency Burrowing Owl Relocation Areas

It is possible that the 300 acres that will be obtained by the City for the Conservation Area(s) may not have the necessary characteristics to provide the requisite burrowing owl habitat requirements to accommodate relocated owls, even if it is enhanced to support the burrowing owl. This could very well be the outcome if the City determines that the Conservation Area needs to be located outside of the Project Area (see discussion under "300-Acre Conservation Area").

In order to address this possible contingency, four areas within the Project Area have been preliminarily identified as Candidate Relocation Areas. These areas are discussed below and

graphically depicted in Exhibit 8. A burrowing owl Candidate Relocation Area will be established only if the 300-acre Conservation Area is not situated or does not provide the requisite habitat elements to accommodate relocated burrowing owls. It should be noted that the Candidate Relocation Areas may overlap the area identified as the potential 300-acre Conservation Area. Below is a discussion of these four potential burrowing owl relocation areas.

Drainage Area "B"

A burrowing owl relocation area (Candidate Relocation Area) has been identified between Kimball and Pine Avenues along the unnamed drainage course (shown as Drainage Area B on Exhibit 7). This site is approximately 40 acres in size and will be designed to accommodate the influx of burrowing owls as well as developed as a Natural Treatment System (NTS) (see Mitigation Measure B-3(5) above in Section 4.2). Exhibit 8 shows the potential location of this site. This site is strategically located to accommodate an influx of several burrowing owl pairs as well as to allow for the north-south movement of owls. Besides providing habitat and a movement corridor for burrowing owls, this Candidate Relocation Area also may provide habitat for migratory waterfowl and may provide an opportunity for the movement of large mammals such as coyotes. The Candidate Relocation Area will be enhanced and protected with a permanent conservation easement as funding becomes available.

If it is determined by the City that a contingency Burrowing Owl Relocation Area site is necessary, first priority will be given to establishing it at this location. The reason for giving this site priority over the others discussed below is that its proximity to areas to be converted to urban development is expected to facilitate passive relocation of burrowing owls. If it is determined that it is necessary to establish this site as a Burrowing Owl Relocation Area, grading and construction of the NTS and owl habitat will occur prior to issuance of the 1,800th building permit within the Project Area.

Candidate Relocation Areas Below the 566-foot Elevation

Four other general areas have been identified that could potentially provide land for additional Candidate Relocation Areas, if needed (see Exhibit 8). These sites would only be established as Owl Relocation Areas in the future on an as-needed basis if it is determined that the Drainage Area B site discussed above becomes inadequate to support additional relocated burrowing owls beyond the population that would already occupy this area.

The first area is generally located east of the Chino Airport, including property owned by San Bernardino County as part of the airport facility. It could also include private lands further to the east, as well as land owned by the Southern California Agricultural Land Foundation (SOCALF). The area

consists of pasture, crops and dairies that have the potential to provide suitable burrowing Owl habitat. Depending on the location of a specific relocation area, cooperative agreements with San Bernardino County and/or SOCALF, or permission from private property owners would be needed to establish a relocation area. The potential for conflict with airport safety or the agricultural operations of SOCALF would also need to be addressed to the satisfaction of SOCALF and/or San Bernardino County.

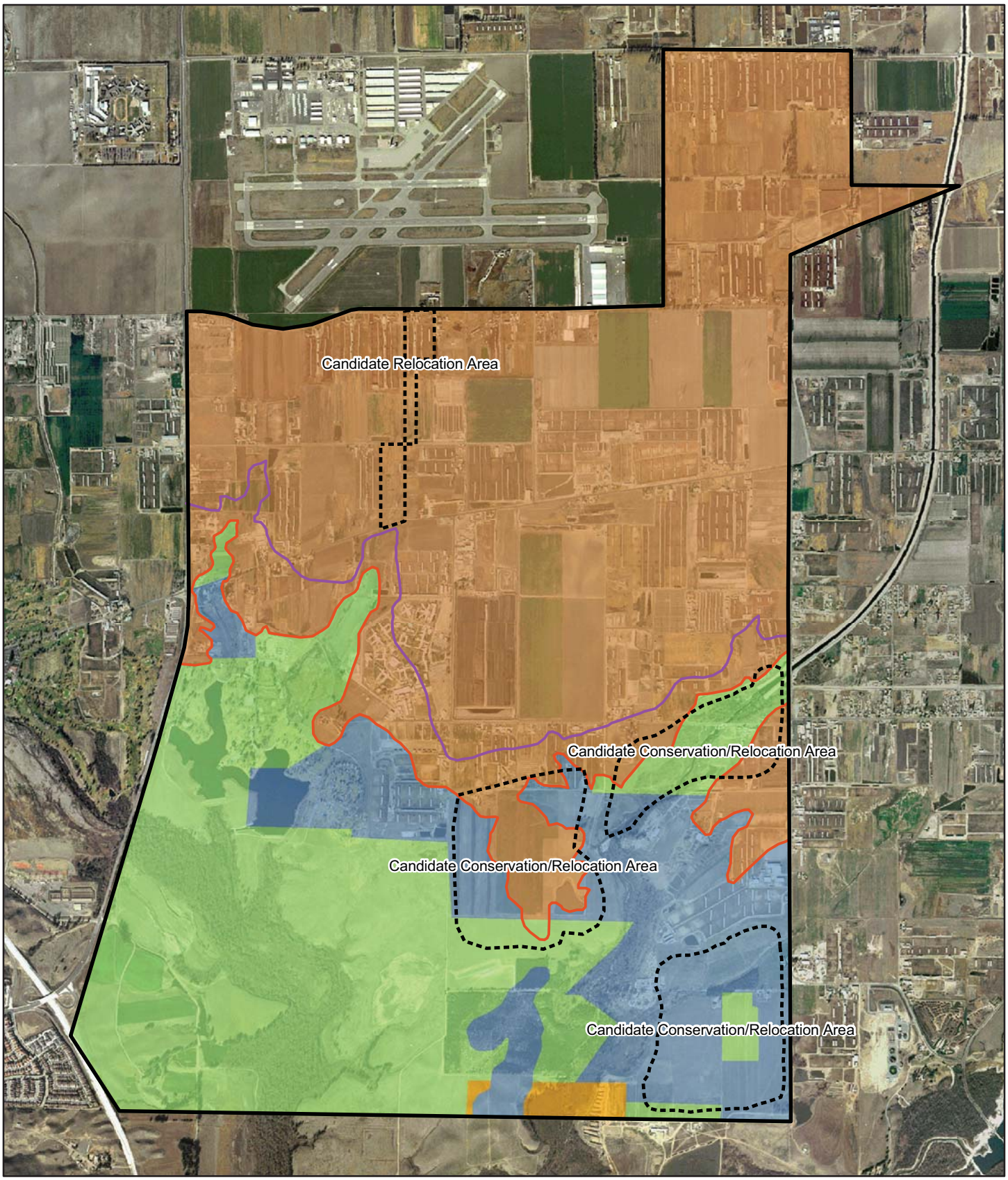
The other three candidate relocation areas are located in the southern part of the Specific Plan, below the 566-foot dam inundation area. One area is centered around the riparian and upland habitats associated with Mill Creek as it transitions into the Project Area along the east boundary. The site provides agricultural lands and natural open space needed to provide suitable burrowing owl habitat. A second area is located within the south central portion of the Project Area (see Exhibit 8). The vegetation is comprised of non-native grassland, and fallow lands agriculture. A third area is located at the southeastern corner of the Project Area below the 566-foot inundation line and is comprised of active agricultural fields.

Exhibit 10 provides information on generalized land ownership patterns within these potential Candidate Relocation Areas. Most land is either in private ownership with no restrictions, private ownership with a flowage easement owned by USACE, or owned in fee by USACE. Most of the land owned by USACE has been leased to San Bernardino County for recreational purposes. Land between the 556-foot inundation line and the 566-foot inundation line is in private ownership but has been identified by the Orange County Flood Control District for acquisition either in fee or through an easement. These lands would all have the potential to be used as Relocation Areas, if needed, provided agreement can be reached with the landowners to allow for such use of their land.

Urban Buffer/Transition Area

The future location of the urban buffer/transition area generally coincides with the linear buffer trail at the southerly edge of the urban development area along the 566-foot line (see Exhibit 4). The buffer will provide for limited access to habitat areas and includes provisions for the logical transition between urban structures/uses and habitat areas.

The key participants in the implementation of the urban buffer/transition area include but are not limited to the City of Chino, private landowners/developers, USACE, Orange County Flood Control District (as acquisition agent for USACE), Chino Institution for Women (State of California), and County of San Bernardino Regional Parks.



Source: City of Chino, MBA

556 Contour Line
566 Contour Line
Candidate Conservation/Relocation Area
Chino Subarea 2 Boundary
Private - No Flowage Easements
Private - with Flowage Easements
Orange County Water District
US Army Corps of Engineers

0 0.25 0.5 1 Miles

NORTH

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Exhibit 10

Generalized Land Ownership Patterns

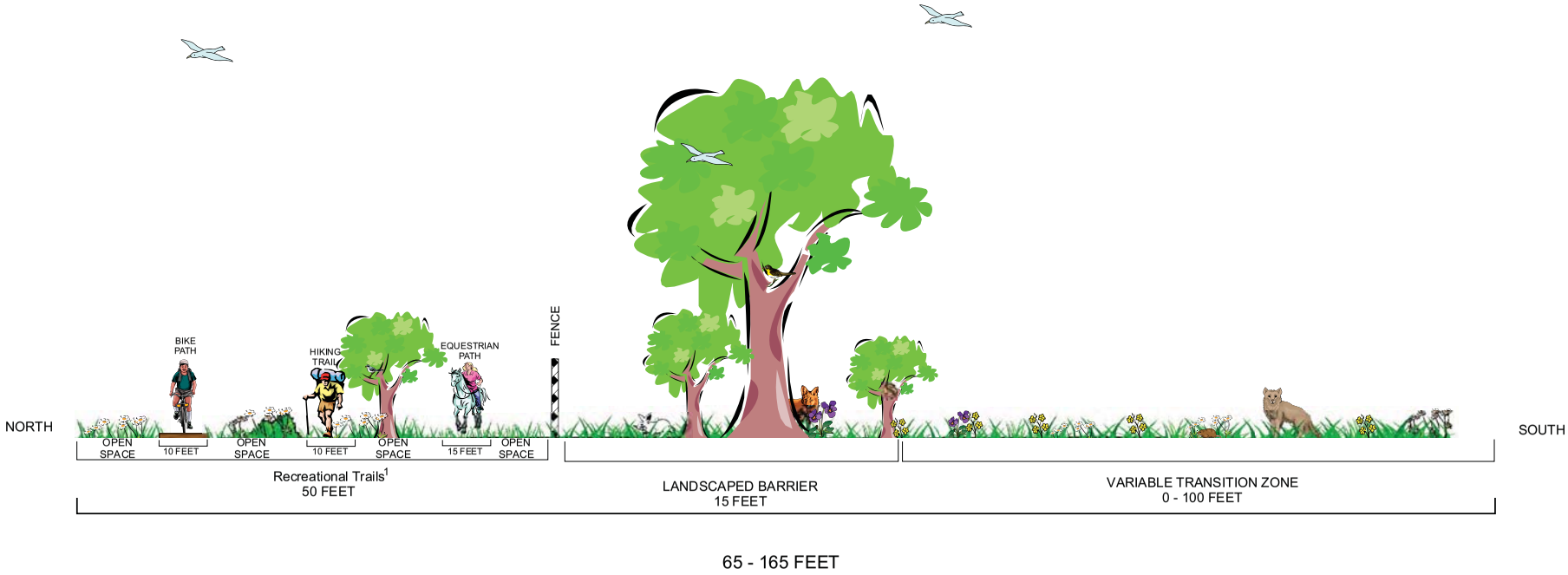
THE PRESERVE SUBAREA 2

Specific features regarding design, conceptual location, buffer width and/or setback requirements, timing and other features of the buffer are described below.

The purpose of establishing an urban buffer/transition area is to accommodate existing agricultural uses and to allow limited recreational and non-impacting uses along its northern half as long as these activities are directed away from wildlife uses south of the buffer. New uses in the northern portion of the buffer could include trails and educational facilities. No trails or active recreational uses, with the exception of limited trail connection to the Coast-to-Crest Trail, would be allowed in the southern portion of the buffer.

It should be noted that the urban buffer/transition area is not a Conservation Area but a transition area between planned urban development generally above the 566-foot inundation line and the open spaces located generally below the line. This urban buffer/transition area will be situated generally on the south side of the 566-foot inundation line. Its location is graphically depicted in Exhibit 8, and a conceptual design is shown in Exhibit 11. The width and design of the buffer will vary depending on the nature of adjoining uses, natural or manmade physical features that provide separation from habitat areas, physical limitations including fencing, and proximity to habitat areas or other sensitive biological resources. However, a typical buffer width ranging from 65 feet to 165 feet is planned with the actual width depending on the sensitivity of adjoining uses. The urban buffer/transition area will be installed concurrent with adjoining development with the precise design determined at the time of the design of individual development projects. The Orange County Flood Control District (OCFCD) is in the process of identifying and acquiring, through purchase in fee or a flowage easement, most of the land between the 556- and 566-foot elevations for flood control purposes and these areas may provide for future opportunities for the location of the urban buffer/transition area. The City of Chino will work with OCFCD regarding the potential future use of these lands for the buffer. Alternatively, land used for the buffer would be dedicated or otherwise reserved for the intended use by adjoining development at the time of the approval of individual developments.

The urban buffer/transition area will cross the Project Area from east to west as shown in Exhibit 8 and will have three distinctive segments: an urban transition edge area, a flood control berm around the California Institute for Women (CIW), and the Edison Corridor. Starting at the eastern boundary just above the point where Cucamonga Creek enters the Project Area, an urban buffer/transition area will proceed westward along the south side of the 566-foot inundation line to the southeast corner of the CIW. This segment of the buffer/transition area will include a recreational trail, a fence, a landscaped barrier, and open space of variable width south of the barrier. A conceptual design for this segment is presented below. A dirt berm will be constructed around CIW, as indicated in Exhibit 8, for flood control purposes. It will control access to areas below the 566-foot inundation line within this



[1]Location may vary depending on final design.

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Exhibit **11**

Urban Buffer / Transition Area Conceptual Design

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segment and will not require a fence and landscape barrier. A recreational trail (the same one described for the urban buffer/transition area, above) will be accommodated along its southern edge. The final segment will be coordinated with the existing alignment of the Edison Corridor, where practical, and will run on the south side of Pine Avenue. The design and alignment of this final segment will be coordinated with existing recreational facilities including an equestrian center, the Moreno Ranch, and Prado Lake. These existing recreational facilities already effectively separate and provide open space between the natural habitats below the 566-foot inundation line and the proposed development above the 566-foot line. Any future expansions or changes to these uses will be reviewed for edge affects on adjoining critical biological resources (if any) as part of the land use application review process. Further, the natural drainage features within the open space areas north of Prado Lake are potential jurisdictional Waters of the U.S. and Waters of the State which will provide for additional buffering. They are protected under the Clean Water Act and California Department of Fish and Game Code. Any potential impacts to these resources and open space will require compliance with the RMP and coordination with the City, the Army Corps of engineers and CDFG.

Design Features for the Urban Buffer/Transition Area

The urban buffer/transition area will be designed to limit and direct human access away from the natural open areas below the 566-foot line. The upper portion of the urban buffer/transition area may include maintained trails to be constructed with monies or fees other than the biological mitigation fee described in this document. Recreational use of this trail will be restricted to hiking, horseback riding, and bicycling in designated trails within a typical 50-foot multipurpose trail corridor cross-section, which is included in the width of the urban buffer/transition area. No motorized vehicles will be allowed on the trail except for emergency and maintenance vehicles. The trail will extend from Hellman Avenue to the southeast corner of CIW. Off-trail human intrusion into areas below the urban buffer/transition area will be managed through signage, vegetation/landscape barriers, and fencing (discussed below).

Trail Design

Pathways. Three trails or pathways will be established in the northern half of the urban buffer: a pedestrian trial, an equestrian trail, and a bike trail, as depicted in Exhibit 11. Maximum width of each trail will range between 10 and 15 feet within a typical multipurpose trail corridor cross-section of 50 feet.

Landscaped Barrier. A landscaped barrier along the south side of the trails will be maintained with native trees and shrubs. This barrier will provide a visual as well as a physical separation between

urbanized areas and wildlife habitats. The landscape areas will consist of heavy shrubs or tree row within a 15-foot wide strip. Shrubs will be chosen to provide a physical and visual barrier and to restrict access. The following native plants are recommended for a shrub or tree row to be landscaped through the center of the buffer:

Bushes/Shrubs

- California bush sunflower (*Encelia californica*)
- Brittlebush (*Encelia farinosa*)
- California sagebrush (*Artemesia californica*)
- California croton (*Croton californicus*)
- Fuchsia-flowering gooseberry (*Ribes speciosum*)
- Black sage (*Salvia mellifera*)
- Matilija poppy (*Romneya coulteri*)
- California buckwheat (*Eriogonum fasciculatum*)
- California wild rose (*Rosa californica*)

Trees

- Toyon (*Heteromeles arbutifolia*)
- Mexican Elderberry (*Sambucus mexicana*)
- Lemonade Berry (*Rhus integrifolia*)
- Scrub oak (*Quercus berberidifolia*)
- Coast live oak (*Quercus agrifolia*)
- Western sycamore (*Platanus racemosa*)
- Fremont's cottonwood (*Populus fremontii*)
- Willow (*Salix* sp.)

Herbacious Plants

- Western goldenrod (*Euthamia occidentalis*)
- California everlasting (*Gnamphalium californicum*)
- California popcorn flower (*Plagiobothrys collinus*)
- California poppy (*Escholzia californica*)
- Blue-eyed grass (*Sisyrinchium bellum*)
- Giant wild rye (*Leymus condensatus*)

Fencing. A fence will be erected at the south edge of the pathways to focus casual activities away from the wildlife habitats below the 566-foot line. The fence should be open, such as split rail fence,

through which wild animals may freely move. A limited number of signed openings in the fence will allow controlled access to open spaces below the 566-foot line.

Berming. Along those portions of the urban buffer beginning at the southeast corner of CIW and continuing towards Pine Avenue, as indicated in Exhibit 8, an earthen berm may be an effective option to fencing as a barrier at certain locations and can function to provide both flood protection and wildlife habitat--in particular, locations for artificial burrowing owl nesting sites.

Transition Area. The lower portion of the buffer (south of the landscaped barrier) will be maintained as natural open space to serve as a transition area (unless the buffer is adjacent to an existing active agricultural use, in which case this additional transitional natural open space is unnecessary).

Signage. At least one interpretative sign will be installed every ¼ mile along the length of the buffer trails between Hellman Avenue and CIW.

Specific urban buffer/transition area designs based on the guidelines established in the RMP will be developed and implemented in phase with adjacent development. The City will review development applications to provide for continuity and transition of the buffer design between adjacent properties.

Timing and Phasing of Urban Buffer/Transition Area Implementation

The phasing of the urban buffer/transition area will generally coincide with development of adjacent properties immediately above the 566-foot line. Development of these areas, which are expected in the latter phases of buildout of the Project Area, may be as much as 10 years or more away. During this period it is possible, and perhaps even likely, that existing private agricultural and dairy uses along the planned buffer zone may change or relocate. Implementation of specific segments of the urban buffer/transition area will be designed and constructed in concert with development along this area and will take into consideration the nature of adjacent areas (generally areas to the south of the buffer/transition area) as well as continuity with segments that may have already been constructed.

Surface Waters

Most of the natural drainages above the 566-foot inundation line have been extensively modified by agricultural activities and no longer qualify as Waters of the U.S. or Waters of the State. Many of these existing surface waters are limited to agricultural detention basins, which are contaminated with dairy wastewater. Loss of these surface water features is not considered a significant impact. However, surface waters within the Project Area provide foraging habitat for migratory birds,

waterfowl, and other wildlife species. As part of conducting a general biological survey of a proposed project site, the biologist will assess the surface waters on the project site and determine if it qualifies as jurisdictional (i.e., Waters of the U.S. or Waters of the State). Impacts to surface waters that are determined to be jurisdictional, must be mitigated through compliances with applicable requirements of USACE, Regional Water Quality Control Board, and CDFG for Section 404 Clean Water Act permits and Streambed Alteration Agreements (see Table 4-3, Required Biological Studies Checklist).

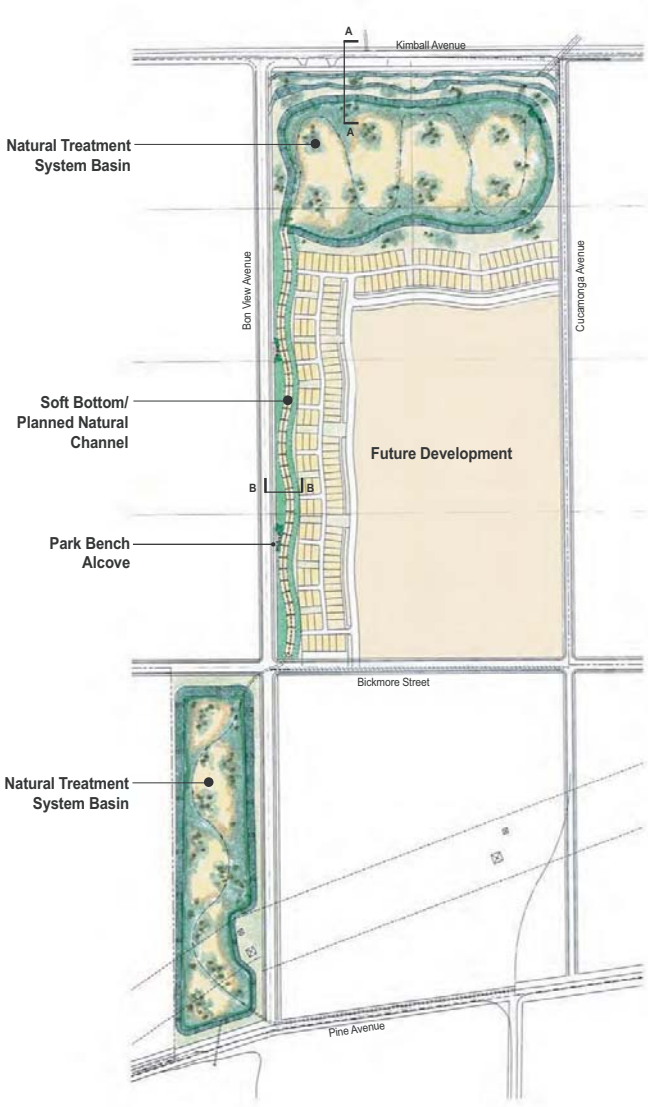
A restoration program will be designed for Drainage Area B (see Exhibit 7) to serve as a naturalized drainage course and enhanced to provide riparian habitat values, including plantings of appropriate native species of plants and trees. It is anticipated that these enhancements will be provided in conjunction with drainage facilities and constructed "Natural Treatment Systems" (NTS) designed to improve water quality. The site may also be designated to function as a burrowing owl Candidate Relocation Area. Exhibit 12 provides an illustrative example of how the drainage area may be designed.

Through these restoration efforts along Drainage B, a minimum of 10 acres of marsh and or riparian habitats shall be constructed in conjunction with drainage facilities and/or NTS for water quality purposes, in order to provide mitigation for loss of the low-quality habitat values of the agricultural detention basins, as well as other surface waters within the Project Area.

Table 4-7 lists requirements for identifying and mitigating potential impacts to surface waters.

TABLE 4-7
SURFACE WATERS CHECKLIST

☐	All development applications will include in the general biological survey conducted for a proposed project, a review of surface waters on the project site.
☐	If it is determined that jurisdictional waters (Waters of the U.S. or Waters of the State) may be present, a jurisdictional delineation must be conducted and submitted to the City for review.
☐	If any impacts to jurisdictional waters are identified based on the jurisdictional delineation and proposed project design, the appropriate wetland permits will be acquired including a wetlands permit under Section 404 of the Clean Water Act and a Streambed Alternation Agreement under CDFG code.



PLAN
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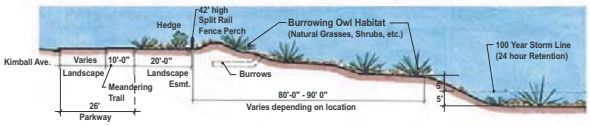

SECTION A
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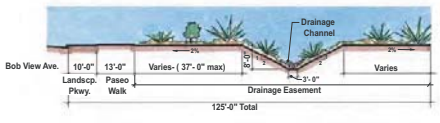

SECTION B
SCALE : 1"= 16'- 0"

Burrowing Owl Habitat Concept Plan

Exhibit 12

THE PRESERVE

Chino, California

January 28, 2003

Existing Windrows

Existing windrows that provide viable raptor habitat shall be retained and incorporated into the design of individual development projects where practical. If retention is demonstrated to be impractical to the satisfaction of the City, the developer shall provide for the replacement of the windrow trees in a manner supportive of raptor habitat. The required biological survey conducted as part of the development application should include an inventory of trees if windrows are present. The biological survey report should also include recommendations on the number of trees, tree specifications, and location of replacement areas for windrows that may be lost. The recommendations shall be based on biological values, as determined by a certified arborist in consultation with an ornithologist specializing in raptor biology.

Replacement trees may be located within the 300-acre Conservation Area or other suitable areas located inside or outside of the project site if consistent with the recommendations of the arborist and ornithologist. The recommendations in the biological survey report will be reviewed by the City in consultation with the wildlife agencies to ensure adequate compensation for the loss of a windrow on a project site.

A tree replacement program must include:

- Description of trees slated for removal;
- Specification for replacement trees: tree species, number of trees for each species, and size of replacement tree;
- Location of replacement area;
- Planting requirements;
- Irrigation requirements;
- Post-planting monitoring requirements, including germination/survival rates and expected growth rates for a 5-year period;
- Requirement to conduct a survey for nesting birds, including raptors, if trees will be removed during breeding season (February 1-August 31); and
- Requirement that trees be removed outside the breeding season if birds are determined to be nesting.

Table 4-8 provides a checklist for addressing the possible presence of windrows on a project site.

TABLE 4-8
WINDROW CHECKLIST

☐	All development applications will include, in the general biological survey conducted for a proposed project, a discussion of existing windrows on the project site.
☐	If windrows are present, a tree replacement program for all trees slated for removal for the project site must be submitted to the City for review and approved by a certified arborist in consultation with an ornithologist specializing in raptor biology. The program will include post-planting monitoring requirements, including germination/survival rates and expected growth rates of trees over a 5-year period.
☐	Completion of a nesting bird survey prior to tree removal, if tree will be removed during the breeding season (February 1 through August 31).
☐	Removal of trees outside the nesting season (February 1 through August 31) if birds are determined to be nesting in trees slated for removal.
☐	Submittal to the City of annual reports for a 5-year period documenting germination/survival rates and growth rates for all newly planted trees. Recommended germination/survival rates and growth rates will be approved by the City as part of their review and approval of a tree replacement program for a project.

Williamson Act Lease Cancellation Fees

Under Mitigation Measure AG-1 (see Section 5.2 in the Draft EIR), which addresses mitigation for the loss of prime agricultural land, the City has committed to participate in the Williamson Act Easement Exchange Program (WAEEP) and any plan that may be adopted pursuant to SB 831 for acquisition of agricultural easements or other conservation easements for the purpose of permanent agricultural land preservation. These easements will also provide mitigation for identified impacts on biological resources in that they will preserve areas in agriculture and prevent the future development of recreational or other non-agricultural uses that could be detrimental to biological resources.

Participation in Regional Efforts

There are several surrounding existing wildlife areas and habitat conservation planning initiatives that benefit from the adjacency and openness of the agricultural fields and dairy operations within The Preserve, including the opportunities afforded by raptor foraging habitat and wintering habitat for migratory waterfowl. Nearby wildlife areas or conservation planning initiatives include:

- Chino Hills State Park;
- USACE and OCWD Prado Basin Master Plan;
- City of Ontario's Wildlife Habitat and Waterfowl and Raptor Conservation Area;
- IEUA Chino Creek Habitat Restoration Program;
- Western Riverside County MSHCP;
- Lower Chino Basin Working Group (Santa Ana River Working Group) Resources Management Planning; and
- The Southern California Agricultural Land Foundation.

The RMP recognizes that most sensitive resources below the 566-foot line will be protected through cooperative programs with USACE, OCFCD, OCWD, IEUA, Counties of San Bernardino and Riverside, the City of Corona, and other agencies currently holding entitlement to land use in the Prado Basin. The following measures and programs described below are already in place and may provide opportunities for coordinated conservation planning efforts within Subarea 2. Although participation in these programs is not required to adequately mitigate the impacts of the proposed development within the Project Area, participation may be mutually beneficial to the City and participating agencies in achieving respective mitigation objectives.

U.S. Army Corps of Engineers (USACE). This federal agency owns in fee or through flowage easements 1,384 acres of land below the 556-foot line within the Project Area. However, the presence of a flowage easement does not guarantee protection of sensitive biological resources, because non-habitable structures or activities that are compatible with flood inundation may still result in adverse impacts to wildlife habitat. Most of USACE land within the Prado Basin has been leased to three local agencies (San Bernardino County, Riverside County and the City of Corona) for recreational use. There are other existing land uses (mostly recreational) currently occurring below 556 feet (e.g., Prado Regional Park, the Prado Equestrian Center, and the Prado Recreation, Inc. Dog Training facilities). Acquisition of conservation easements over some of these lands could provide additional protection for sensitive resources.

Orange County Flood Control District (OCFCD). This agency is in the process of identifying lands between the 556- and 566-foot elevations for purchase in fee or through flowage easements. Again, these lands, while tied up for flood control purposes, could be used for recreational pursuit, etc. that could conflict with its conservation value to wildlife. Acquisition of land uses above the flood control easements may be available and could be acquired for a conservation easement.

Orange County Water District (OCWD). The OCWD is an implementing partner and field manager for the USACE *Prado Basin Flood Control Master Plan*. It is also the principal action agency in the implementation and management of the Santa Ana River Watershed Plan (as described above). Cooperative efforts with OCWD will provide the City of Chino excellent opportunities to participate in various conservation programs, including:

- Arundo removal;
- Riparian restoration/enhancement;
- Riverine restoration/enhancement;
- Creation of upland vegetation buffers;
- Created wetlands;

- Endangered species inventories and monitoring;
- Least Bell's vireo recovery;
- Wetlands/riparian inventories/mapping;
- Watershed management; and
- Avifauna inventories and monitoring.

San Bernardino County. San Bernardino County leases land within the Project Area and generally below the 566-foot line from the USACE for recreational programs. Not all their leased lands are being used for recreational purposes. San Bernardino County has identified surplus lands and may be willing to let the City of Chino assume the recreational lease from USACE. The City would then be able to limit uses on the land to protect its habitat value. Expected uses would include passive recreational use such as hiking and equestrian trails.

4.4 PROGRAM MANAGEMENT

It is the intent of the City of Chino to turn over the management of the 300-acre Conservation Area to a conservancy, land trust, or other similar management agency at the earliest opportunity, provided that implementation of mitigation measures in the RMP is assured. In the interim, the City will provide for the management of the Conservation Area. As part of this interim process, the City's Director of Community Development or his designee will serve as the lead for coordinating all conservation efforts related to mitigation measures in the Project Area. If the duties are delegated to a designee, that individual must have experience in the City's planning and entitlement process including CEQA documentation. It will be the Director of Community Development's responsibility to ensure that all aspects of this RMP are met, all necessary permits and/or coordination are accomplished, and any difficulty or deviation from expectation is quickly discovered and resolved. At the City's option, an independent professional biologist or ecologist familiar with the region's natural resources and experienced in conservation management may be retained to assist the Director of Community Development or his designee in overseeing these conservation efforts.

It will be the responsibility of the Director of Community Development or his designee to:

- Make sure that each applicant/landowner conducts the necessary biological surveys and submits technical reports as part of the application process;

- Ensure that land use applications and development proposal comply with the provisions of the RMP;

- Ensure that, if required, wildlife and regulatory permits are in place prior to issuing a grading permit;
- Review and approve onsite monitoring plans for biological resources during grading/development activities, if required;
- Report as soon as possible any unusual or important resources discovery to the appropriate wildlife agencies; and
- Prepare the annual RMP progress report that shall contain the following information:
  - Description of Conservation Area(s) established;
  - Description of all Enhancement/Restoration Efforts initiated;
  - Review of all additional City initiated mitigation measures implemented during the year;
  - Listing and description of all proposed projects including a review of all biological reports submitted as part of the development application;
  - Review of all mitigation fees collected and expenditures made during the year;
  - Discussion of all proposed project specific mitigation measures including State or Federal permits, if any, and programs in place for ensuring implementation;
  - Evaluation of the effectiveness of all implemented mitigation measures in avoiding and/or reducing impacts to sensitive biological resources;
  - Anticipated conservation/mitigation measures to be implemented in the upcoming year; and
  - Suggested changes to monitoring measures, if needed, to track the effectiveness of the mitigation measures.

Reports will be prepared annually by the City until such time that a conservancy assumes management responsibilities for the designated Conservation Areas and programs. Annual reports will be sent to CDFG and other cooperating agencies for review and comment prior to finalizing the subsequent year's program.

Table 4-9 contains a list of milestones to be accomplished as part of implementing this RMP for the Project Area. Each is detailed above in Section 4.3 but summarized below in checklist form for ease of tracking. Compliance with these items should be addressed in the annual progress report.

4.5 MITIGATION FEE

The development of land planned for development will require the payment of a recommended mitigation fee (estimated to be $5,000 per adjusted gross acre) consistent with the requirements of mitigation measure B-3(8) of the EIR. This mitigation fee will be applied to all development projects in the Project Area subject to approval by the City of this mitigation fee in accordance with Government Code Section 66000, et. Seq. Appendix H provides assumptions and the bases for estimated mitigation costs. The fee will be structured to cover the estimated cost of the identified mitigation measures. In lieu of paying the required fee, an applicant/landowner may be able to provide suitable land meeting the mitigation criteria established in Tables 4-4 and 4-5.

TABLE 4-9
BIOLOGICAL RESOURCES MITIGATION MILESTONES

Mitigation Measure	Timing	Responsible Party	Coordinating Agency	Reference RMP
Required Biological Surveys:				
General Survey	Concurrent with submitting Development Application	Applicant/Landowner	City of Chino	Pg. 4-14 – 4-16
Focused Survey(s), if needed:				
Burrowing Owl	Prior to Entitlement	Applicant/Landowner	City of Chino and CDFG	Pg. 4-14 – 4-16
Migratory Birds and Waterfowl	Prior to Entitlement	Applicant/Landowner	City of Chino and USFWS	Pg. 4-14 – 4-16
Least Bell's Vireo	Prior to Entitlement	Applicant/Landowner	City of Chino and USFWS	Pg. 4-14 – 4-16
Southwestern willow flycatcher	Prior to Entitlement	Applicant/Landowner	City of Chino and USFWS	Pg. 4-14 – 4-16
Delhi sands flower-loving fly Habitat Assessment	Prior to Entitlement	Applicant/Landowner	City of Chino and USFWS	Pg. 4-14 – 4-16
Jurisdictional Delineation	Prior to Entitlement	Applicant/Landowner	City of Chino and USACOE	Pg. 4-14 – 4-16
Pre-construction Survey, if needed	Within 30 days Prior to Construction	Applicant/Landowner	City of Chino	Pg. 4-14 – 4-16
Biological Permits, if needed:				
USFWS Endangered Species	Prior to Entitlement	Applicant/Landowner	USFWS	Pg. 4-14 – 4-16
CDFG Endangered Species; 1603 Streambed Alteration Agreement	Prior to Entitlement	Applicant/Landowner	CDFG	Pg. 4-14 – 4-16
USACE 404 Nationwide	Prior to Entitlement	Applicant/Landowner	USACOE	Pg. 4-14 – 4-16
WQCB 401 Water Certification	Prior to Entitlement	Applicant/Landowner	WQCB	Pg. 4-14 – 4-16

TABLE 4-9 (Cont.)
BIOLOGICAL RESOURCES MITIGATION MILESTONES

Mitigation Measure	Timing	Responsible Party	Coordinating Agency	Reference RMP
RMP Programs:				
300-acre Conservation Area	As Funding becomes Available	City of Chino	City of Chino	Pg. 4-16 – 4-19
Enhancement/Restoration	As Funding becomes Available	City of Chino	City of Chino	Pg. 4-19 – 4-20
Burrowing Owl Mitigation – Passive Relocation	Prior to Issuance of Grading Permit	Applicant/Landowner	City of Chino	Pg. 4-21 – 4-27
Burrowing Owl Mitigation – 40-acre Relocation Area	Prior to Issuance of the 1800th Building Permit	Applicant/Landowner	City of Chino	Pg. 4-21 – 4-27
Burrowing Owl Mitigation – Additional Relocation Sites	As needed	Applicant/Landowner	City of Chino	Pg. 4-21 – 4-27
Urban Buffer/Transition Area	Concurrent with Adjacent Development	City of Chino	City of Chino	Pg. 4-26 – 4-32
Surface Water	Prior to Issuance of the 1800th Building Permit	Applicant/Landowner	City of Chino	Pg. 4-32 – 4-34
Windrows	Prior to Issuance of Grading Permit	Applicant/Landowner	City of Chino	Pg. 4-33 – 4-35
Mitigation Fees:				
Establish Fee	Prior to Issuance of First Building Permit	City of Chino	City of Chino	Pg. 4-39 – 4-44
Payment of Fee	With Submittal of Development Application	Applicant/Landowner	City of Chino	Pg. 4-39 – 4-44

Table 4-10 provides a breakdown of the preliminary estimated costs for different components of the mitigation fee. The actual establishment of the fee will be done in accordance with the Mitigation Fee Act and will include the preparation of a Nexus Analysis. Appendix H also provides additional information on the factors and considerations that will ultimately form the bases for the fee when it is adopted. The fee will be adopted prior to the issuance of any grading permits for new development.

TABLE 4-10
ESTIMATED ENVIRONMENTAL MITIGATION FEES

Mitigation Measure(s)	Estimated Costs
Conservation Area(s)	
300-acre Conservation Area[1]	$4,000,000
Enhancement/Restoration	
Create 10-acre Riparian Habitat[2]	750,000
Create 7,200 linear feet of Urban Buffer[3]	500,000
Management of Enhancement/Restoration Efforts (10%)	125,000
Available for Enhancement/Restoration and Potential Land Acquisition[4]	4,600,000
Total Mitigation Costs	**$9,975,000**
Total Cost per Developable Acre[5]	**$4,988**
Rounded Environmental Mitigation Cost per Developable Acre	**$5,000**

Notes:
[1] Cost to obtain Conservation Area land.
[2] Cost to improve 10 acres of riparian habitat.
[3] Costs for split rail fencing and 15-foot wide landscaping along 7,200-linear-foot ± buffer area from Hellman to CIW property. Trail cost is within special amenity development fees.
[4] This amount is an aggregate available for enhancement, restoration if needed on the Conservation Area (300 acres) for improving, enhancing raptor foraging habitat, burrowing owl habitat with artificial burrows, or acquiring additional land.
[5] Based on 2,000 acres of developable land paying fees.

Below is a brief description of the various cost components identified in Table 4-10.

4.5.1 300-acre Conservation Area

Lands for the 300-acre Conservation Area will be obtained through agreements with landowners in the form of an irrevocable license, conservation agreement, right-of-entry, or other legally enforceable instrument with the mitigation fees collected from all development applications. The preliminary estimate provided would apply to either lands onsite within the Project Area or offsite.

4.5.2 Habitat Restoration/Enhancement

This general category includes preliminary estimates of basically all other costs except for those related to obtaining the 300-acre Conservation Area. The first two subcategories shown in Table 4-10 for Enhancement/Restoration include the estimated costs for the creation of 10 acres of marsh and/or riparian habitat and improvements related to the urban buffer/transition area. In addition, a 10 percent management/administrative costs was assumed for these improvements.

The next category ("Available For Enhancement, Restoration and Potential Land Acquisition") is intended to include all the costs associated with the enhancements/restoration that may be needed for the 300 acres that will comprise the Conservation Area. The estimated figure for this cost component ($4.6 million) is on the conservative side in order to ensure that adequate funding is available to implement needed enhancements and/or restoration. As mentioned previously, the actual amount needed for restoration/enhancement efforts for the 300-acre Conservation Area will ultimately depend on the specific characteristics of the site(s) selected. If, after site selection and analysis of needed enhancements/restoration for the 300-acre Conservation Area is completed, it is determined that less than the total $4.6 million will be needed, the excess may be allocated to other items. Such items may include, but are not limited to, other enhancements/restorations or other measures to benefit the burrowing owl; acquisition of land; conservation easements or similar restrictive instruments; and improvement/restoration of riparian areas and similar purposes. Although these excess funds may be used for the purposes listed above, the initial amount of excess funds, up to a total of $1 million, must be dedicated to actions that will benefit the burrowing owl.

In the event that the site selected for the 300-acre Conservation Area is deficient in one or more of the characteristics needed to support the requisite habitat requirements, any excess funds must be dedicated to addressing such deficiency, as needed, before the balance of such excess funds (minus the funds dedicated to addressing the deficiency) can be used for any of the other purposes identified in the preceding paragraph. For example, if the City determines that the site chosen does not have the habitat characteristics needed to support the burrowing owl, the excess funds would need to be dedicated to addressing this deficiency. Once funds have been allocated to address such deficiency and it is estimated that there will still be an excess of funds, the first million dollars of such excess funds (after the deficiency is addressed) will be dedicated, on a priority basis, to purposes beneficial to the burrowing owl.

General Priority For Funding

The list below provides a general ordering of what the priorities will be for utilization of funds as money is collected over time through the mitigation fee. Priority for fee utilization will also be reviewed on an annual basis as part of the RMP progress report (see Section 4.4, Program Management).

1. Obtaining/securing rights to the 300-acre Conservation Area;
2. Establishment of the Drainage Area "B" Burrowing Owl Relocation Site, including needed enhancements/restoration efforts (if needed);
3. Creation of 10-acre marsh/riparian area;
4. Installation of enhancement/restoration improvements for the 300-acre Conservation Area (to the extent needed). Evaluation of the priority for the use of "excess funds" (if any) will be evaluated once the site is selected and enhancement/restoration costs have been identified;
5. Establishment of additional Candidate Relocation Area(s) (if and when they are needed); and
6. Improvements related to the urban buffer/transition area.

Funding for management and administration will be allocated annually on an as-needed basis.

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A/OS2 Permitted Land Uses

a. Commercial row, field, tree and nursery crops cultivation in compliance with section 20.11.040.B.1 of the Chino Zoning Ordinance, except that expansions of such crop farming to areas that have not been farmed within the previous 5 years are subject to an Administrative Approval.
b. Continuation of grazing where grazing has occurred within the previous 5 years. Areas where grazing has not occurred within the past 5 years require an Administrative Approval. The Administrative Approval must also comply with any applicable requirements or standards of the Resource Management Plan.
c. Conservation Areas (wildlife/natural habitats and sanctuaries and habitat enhancement areas).
d. Trails.
e. Public infrastructure facilities including but not limited to those necessary for; drainage and flood control including the retention or detention of flood waters and other similar facilities necessary to control downstream erosion; controlling or reducing water runoff pollutants; public communications; facilities necessary to provide for public safety or health.

A/OS3 Prohibited Uses

a. Expansions or new dairies, calf nurseries, and other similar intense animal uses.
b. Cemeteries
c. Athletic fields.
d. Auditoriums, Stadiums, and other similar facilities.
e. Golf Courses and miniature golf.
f. Tennis and swimming clubs.
g. All off-road vehicles and motorcycles.

A/OS4 Uses Subject to a Special Conditional Use Permit

a. Interpretive Facilities
b. Low-intensity public parks and other passive recreation uses provided that they do not negatively impact wildlife and other biological resources.
c. Major Communications Facilities as defined by the Chino Zoning Ordinance and in compliance with section 20.09.050.D.9 of the Zoning Ordinance.
d. Utility stations and associated equipment buildings.
e. Apiaries
f. Public recreational facilities owned or controlled by a public agency. Examples of such facilities include but are not limited to: historic and monument sites; recreational or organizational camps; botanical gardens and arboretums; hunting and fishing clubs. Development shall be subject to the criteria listed below:

(i) Landscaping plans should minimize any impact on existing native species especially those species that are of high biological value. In addition, restorative landscaping should incorporate indigenous plant materials as a means of mitigating visual impacts associated with the construction of new buildings, structures or other improvements within the zone.
(ii) Buildings, structures and improvements should incorporate designs in which scale, mass, and height respect the undisturbed character of the area. Designs should follow existing topography, blend in with the natural landscape and otherwise minimize their visual prominence.

(iii) The use of herbicides to control or kill vegetation is not permitted.

g. Expansions to the Prado Regional Park facility in areas adjacent to the developed or improved portions of the facility. Such expansion must also comply with any applicable requirements or standards of the Resource Management Plan

A/OS5 Administratively Permitted and Incidental Uses
a. As allowed by the OS Zone, Section 20.11.030 of the Zoning Ordinance.

A/OS6 Development Standards
a. Minimum lot size: None.
b. Minimum lot width: None.
c. Minimum front, side and rear setbacks: None.
d. Maximum site coverage: None.
e. Maximum building height: 35 ft.
f. Setbacks to avoid impacts to biological resources: Additional setbacks for structures or uses may be required if determined by the Director of Community Development to be necessary to ameliorate negative impacts on biological resources that adjoin such structure or use.

A/OS7 Performance Standards
a. All development and all land uses below the 566' dam inundation elevation shall comply with the requirements of the Dam Inundation Overlay.

b. The AG/OSN Land Use Designation is located in areas that either have significant biological resources and/or have the potential to negatively affect such resources. A Resource Management Plan (RMP) has been prepared as part of the environmental mitigation program for The Preserve in order to address and protect these resources. All developments within the AG/OSN designation must comply with the requirements and guidelines of the RMP.

A/OS8 Development Standards
a. Minimum lot size: None.
b. Minimum lot width: None.
c. Minimum front, side and rear setbacks: None.
d. Maximum site coverage: None.
e. Maximum building height: 35 ft.
f. Setbacks to avoid impacts to biological resources: Additional setbacks for structures or uses may be required if determined by the Director of Community Development to be necessary to ameliorate negative impacts on biological resources that adjoin such structure or use.

Open Space-Recreation (OS-R)

OSR1 Intended character: The Open Space-Recreation Land Use Designation is intended to establish open space areas for active and passive recreation and to provide protection from environmental hazards.

OSR2 Permitted Land Uses
a. Caretaker quarters.
b. Child daycare associated with a public facility (community center, public park, etc.).
c. Commercial row, field, tree and nursery crops cultivation in compliance with section 20.11.040.B.1 of the Chino Zoning Ordinance.

d. Conservation areas (wildlife/natural habitats, habitat enhancement areas and sanctuaries)
e. Equestrian facilities.
f. Minor Communications Facilities subject to an Administrative Approval as provided in the Chino Zoning Ordinance and in compliance with Section 20.09.050.D.9 of the Zoning Ordinance.
g. Public parks and related facilities (community centers, senior centers, and other community buildings/structures, etc.)
h. Temporary Facilities subject to an Administrative Approval as provided in the Chino Zoning Ordinance and in compliance with Section 20.11.040.B.29 of the Zoning Ordinance. (Includes facilities which do not require the construction /installation of any structures)
i. Public infrastructure facilities including but not limited to those necessary for; drainage and flood control including the retention or detention of flood waters and other similar facilities necessary to control downstream erosion; controlling or reducing water runoff pollutants; public communications; facilities necessary to provide for public safety or health.

OSR3 Prohibited Uses

a. Expansions or new dairies, calf nurseries, and other similar intense animal uses.

OSR4 Uses Subject to a Special Conditional Use Permit

a. Major Communications Facilities as defined by the Chino Zoning Ordinance and in compliance with Section 20.09.050.D.9 of the Zoning Ordinance.

b. Eating places in conjunction with and incidental to permitted or conditionally permitted recreational uses. (Includes restaurants, convenience foods and specialty foods). Alcoholic beverage sales in conjunction with and incidental to eating places may be permitted subject to approval of a Special Conditional Use Permit and in compliance with Section 20.11.040.B.22 of the Zoning Ordinance.

c. Sporting and Recreational Camps.
d. Trailer Parks and Campsites.
e. RV Storage above the 566' Dam Inundation Elevation.
f. Athletic Fields (For commercial uses, only. Does not include those provided as part of a public park.)
g. Regulation Golf Courses (includes incidental retail activities supporting golf course operations, such as pro shops and eating establishments)
h. Live entertainment incidental to and in conjunction with another permitted or conditionally permitted use.
i. Skating rinks.
j. Sports and Recreation Centers (private and commercial facilities).
k. Tennis and swimming clubs
l. Employer provided on-site daycare
m. Utility stations and associated equipment buildings
n. Apiaries
o. Cemeteries.

OSR5 Administratively Permitted and Incidental Uses

a. As allowed by the OS Zone, Section 20.0110.30 of the Zoning Ordinance.
b. Incidental processing drying & packing of agricultural commodities produced on site.
c. Incidental, seasonal sales stands for row, field, trees & nursery crops produced on site.

OSR6 Prohibited Uses

a. Expansions or new dairies, calf nurseries and other similar intense animal uses.

OSR7 Development Regulations

a. Minimum lot size: None.
b. Minimum lot width: None.
c. Minimum front, side and rear setbacks:
   1. None. Unless adjacent to residentially designated property, in which case a minimum of 30 ft. setback shall apply to all structures.
d. Maximum site coverage: None.
e. Maximum building height: 35 ft.
f. Setbacks to avoid impacts to biological resources: Additional setbacks for structures or uses may be required if determined by the Director of Community Development to be necessary to ameliorate negative impacts on biological resources that adjoin such structure or use.

Open Space-Natural (OS-N)

OSN1 Intended character: The Open Space-Natural Land Use Designation is intended to accommodate permanent natural open space, wildlife preserves, natural drainage and stream courses, cultural and historic resources, and protect natural plant and animal habitats. This designation also permits the use of open space areas for crop farming, passive outdoor recreational uses and other low intensity recreational uses in some instances.

OSN2 Permitted Land Uses

a. Conservation Areas (wildlife/natural habitats and sanctuaries and habitat enhancement areas).
b. Trails.
c. Commercial row, field, tree and nursery crops cultivation in compliance with section 20.11.040.B.1 of the Chino Zoning Ordinance is permitted for:
   1. Land currently under cultivation
   2. Land that has been under cultivation within the previous five years
   3. Lands that have been used for agricultural uses other than cultivation within the previous five years (e.g. dairies, livestock raising, etc.)
d. Continuation of grazing on lands where grazing has occurred within the previous 5 years. Areas where grazing has not occurred within the previous 5 years require an Administrative Approval. The Administrative Approval must also comply with any applicable requirements or standards of the Resource Management Plan.

e. Public infrastructure facilities including but not limited to those necessary for: drainage and flood control, including the retention or detention of flood waters and other similar facilities necessary to control downstream erosion; controlling or reducing water runoff pollutants; public communications; facilities necessary to provide for public safety or health.

OSN3 Uses Subject to a Special Conditional Use Permit

a. Low intensity public parks and passive recreation uses provided that they do not negatively impact biological resources.
b. Interpretive facilities and outdoor exhibits.
c. Limited access roads servicing permitted facilities.
d. Expansions of commercial row, field, tree and nursery crops cultivation, in compliance with section 20.11.040.B.1 of the Chino Zoning Ordinance, if such expansion does not meet any of the conditions specified in section OSN2(c), above. Such expansion must

also comply with any applicable requirements or standards of the Resource Management Plan.

e. Public recreational facilities owned or controlled by a public agency. Examples of such facilities include but are not limited to: historic and monument sites; recreational or organizational camps; botanical gardens and arboretums; hunting and fishing clubs. Development shall be subject to the criteria listed below:

   1. The use of herbicides to control or kill vegetation is not permitted.

   2. Landscaping plans should minimize any impact on existing native species especially those species that are of high biological value. In addition, restorative landscaping should incorporate indigenous plant materials as a means of mitigating visual impacts associated with the construction of new buildings.

   3. Buildings, structures and improvements should incorporate designs in which scale, mass, and height respect the undisturbed character of the area. Designs should follow existing topography, blend in with the natural landscape and otherwise minimize their visual prominence.

f. Expansions to the Prado Regional Park facility in areas adjacent to the developed or improved portions of the facility. Such expansion must also comply with any applicable requirements or standards of the Resource Management Plan

OSN4 Prohibited Uses

a. New and expansions of existing dairies, calf nurseries and other similar intense animal uses.
b. Cemeteries
c. Athletic fields.
d. Auditoriums, Stadiums, and other similar facilities.
e. Golf Courses and miniature golf.
f. Tennis and swimming clubs.
g. All off-road vehicles and motorcycles.

OSN5 Administratively Permitted and Incidental Uses

a. As allowed by the GS Zone Section 20.11.030 of the Zoning Ordinance.
b. Administratively permitted agricultural uses referenced under Section OSN 2.

OSN6 Performance Standards

a. All development and all land uses below the 566' dam inundation elevation shall comply with the requirements of the Dam Inundation Overlay.

b. The OS-N Land Use Designation is located in areas that either have significant biological resources and/or have the potential to negatively affect such resources. A Resource Management Plan (RMP) has been prepared as part of the environmental mitigation program for The Preserve in order to address and protect these resources. All developments within the OS-N designation must comply with the requirements and guidelines of the RMP.

OSN7 Development Regulations

i. Minimum lot size: None
ii. Minimum lot width: None.
iii. Minimum front, side and rear setbacks: None

iv. Maximum site coverage: None.
v. Maximum site coverage: None.
vi. Maximum building height: 35 ft.
vii. Setbacks to avoid impacts to biological resources: Additional setbacks for structures or uses may be required if determined by the Director of Community Development to be necessary to ameliorate negative impacts on biological resources that adjoin such structure or use.

APPENDIX F

CDFG BURROWING OWL RELOCATION PROTOCOL

State of California

Memorandum

: "Div. Chiefs - IFD, BDD, NED, & WMD
Reg. Mgrs. - Regions 1, 2, 3, 4, & 5

Date : October 17, 1995

From : Department of Fish and Game

Subject :
Staff Report on Burrowing Owl Mitigation

I am hereby transmitting the Staff Report on Burrowing Owl Mitigation for your use in reviewing projects (California Environmental Quality Act [CEQA] and others) which may affect burrowing owl habitat. The Staff Report has been developed during the last several months by the Environmental Services Division (ESD) in cooperation with the Wildlife Management Division (WMD) and regions 1, 2, and 4. It has been sent out for public review and redrafted as appropriate.

Either the mitigation measures in the staff report may be used or project specific measures may be developed. Alterative project specific measures proposed by the Department divisions/regions or by project sponsors will also be considered. However, such mitigation measures must be submitted to ESD for review. The review process will focus on the consistency of the proposed measure with Department, Fish and Game Commission, and legislative policy and with laws regarding raptor species. ESD will coordinate project specific mitigation measure review with WMD.

If you have any questions regarding the report, please contact Mr. Ron Rempel, Supervising Biologist, Environmental Services Division, telephone (916) 654-9980.

COPY Original signed by C.F. Raysbrook

C. F. Raysbrook
Interim Director

Attachment

cc: Mr. Ron Rempel
Department of Fish and Game
Sacramento

STAFF REPORT ON BURROWING OWL MITIGATION

Introduction

The Legislature and the Fish and Game Commission have developed the policies, standards and regulatory mandates to protect native species of fish and wildlife. In order to determine how the Department of Fish and Game (Department) could judge the adequacy of mitigation measures designed to offset impacts to burrowing owls *(Speotyto cunicularia;* A.O.U. 1991) staff (WMD, ESD, and Regions) has prepared this report. To ensure compliance with legislative and commission policy, mitigation requirements which are consistent with this report should be incorporated into: (1) Department comments to Lead Agencies and project sponsors pursuant to the California Environmental Quality Act (CEQA); and (2) other authorizations the Department gives to project proponents for projects impacting burrowing owls.

This report is designed to provide the Department (including regional offices and divisions), CEQA Lead Agencies and project proponents the context in which the Environmental Services Division (ESD) will review proposed project specific mitigation measures. This report also includes preapproved mitigation measures which have been judged to be consistent with policies, standards and legal mandates of the Legislature,. the Fish and Game Commission and the Department's public trust responsibilities. Implementation of mitigation measures consistent with this report are intended to help achieve the conservation of burrowing owls and should compliment multi-species habitat conservation planning efforts currently underway. The *Burrowing Owl Survey Protocol and Mitigation Guidelines* developed by The California Burrowing Owl Consortium (CBOC 1993) were taken into consideration in the preparation of this staff report as were comments from other interested parties.

A range-wide conservation strategy for this species is needed. Any range-wide conservation strategy should establish criteria for avoiding the need to list the species pursuant to either the California or federal Endangered Species Acts through preservation of existing habitat, population expansion into former habitat, recruitment of young into the population, and other specific efforts.

California's burrowing owl population is clearly declining and, if declines continue, the species may qualify for listing. Because of the intense pressure for urban development within suitable burrowing owl nesting and foraging habitat (open, flat and gently rolling grasslands and grass/shrub lands) in California, conflicts between owls and development projects often occur. Owl survival can be adversely affected by disturbance and foraging habitat loss even when impacts to individual birds and nests/burrows are avoided. Adequate information about the presence of owls is often unavailable prior to project approval. Following project approval there is no legal mechanism through which to seek mitigation other than avoidance of occupied burrows or nests. The absence of standardized survey methods often impedes consistent impact assessment.

Burrowing Owl Habitat Description

Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation (Zarn 1974). Suitable owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat. Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls (Henny and Blus 1981). Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement.

Occupied Burrowing Owl Habitat

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Occupancy of suitable burrowing owl habitat can be verified at a site by detecting a burrowing owl, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance. Burrowing owls exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992). A site should be assumed occupied if at least one burrowing owl has been observed occupying a burrow there within the last three years (Rich 1984).

CEQA Project Review

The measures included in this report are intended to provide a decision-making process that should be implemented whenever there is potential for an action or project to adversely affect burrowing owls. For projects subject to the California Environmental Quality Act (CEQA), the process begins by conducting surveys to determine if burrowing owls are foraging or nesting on or adjacent to the project site. If surveys confirm that the site is occupied habitat, mitigation measures to minimize impacts to burrowing owls, their burrows and foraging habitat should be incorporated into the CEQA document as enforceable conditions. The measures in this document are intended to conserve the species by protecting and maintaining viable' populations of the species throughout their range in California. This may often result in protecting and managing habitat for the species at sites away from rapidly urbanizing/developing areas. Projects and situations vary and mitigation measures should be adapted to fit specific circumstances.

Projects not subject to CEQA review may have to be handled separately since the legal authority the Department has with respect to burrowing owls in this type of situation is often limited. The burrowing owl is protected from "take" (Section 3503.5 of the Fish and Game Code) but unoccupied habitat is likely to be lost for activities not subject to CEQA.

Legal Status

The burrowing owl is a migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R. 21). Sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. To avoid violation of the take provisions of these laws generally requires that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle (February 1 to August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered "take"' and is potentially punishable by fines and/or imprisonment.

The burrowing owl is a Species of Special Concern to California because of declines of suitable habitat and both localized and statewide population declines. Guidelines for the Implementation of the California Environmental Quality Act (CEQA) provide that a species be considered as endangered or "rare" regardless of appearance on a formal list for the purposes of the CEQA (Guidelines, Section 15380, subsections b and d). The CEQA requires a mandatory findings of significance if impacts to threatened or endangered species are likely to occur (Sections 21001 (c), 2103; Guidelines 15380, 15064, 15065). To be legally adequate, mitigation measures must be capable of "avoiding the impact altogether by not taking a certain action or parts of an action"; "minimizing impacts by limiting the degree or magnitude of the action and its implementation"; "rectifying the impact by repairing, rehabilitating or restoring the impacted environment"; "or reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action" (Guidelines, Section 15370). Avoidance or mitigation to reduce impacts to less than significant levels must be included in a project or the CEQA lead agency must make and justify findings of overriding considerations.

Impact Assessment

Habitat Assessment

The project site and a 150 meter (approximately 500 ft.) buffer (where possible and appropriate based on habitat) should be surveyed to assess the presence of burrowing owls and their habitat (Thomsen 1971, Martin 1973). If occupied habitat is detected on or adjacent to the site, measures to avoid, minimize, or mitigate the project's impacts to the species should be incorporated into the project, including burrow preconstruction surveys to ensure avoidance of direct take. It is also recommended that preconstruction surveys be conducted if the species was not detected but is likely to occur on the project site.

Burrowing Owl and Burrow Surveys

Burrowing owl and burrow surveys should be conducted during both the wintering and nesting seasons, unless the species is detected on the first survey. If possible, the winter survey should be conducted between December 1 and January 31 (when wintering owls are most likely to be present) and the nesting season survey should be conducted between April 15 and July 15 (the peak of the breeding season). Surveys conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise, are also preferable.

Surveys should be conducted by walking suitable habitat on the entire project site and (where possible) in areas within 150 meters (approx. 500 ft.) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors -such as noise and vibration (heavy equipment, etc.) during project construction. Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approx. 100 ft.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To effectively survey large projects (100 acres or larger), two or more surveyors should be used to walk adjacent transects. To avoid impacts to owls from surveyors, owls and/or occupied burrows should be avoided by a minimum of 50 meters (approx. 160 ft.) wherever practical. Disturbance to occupied burrows should be avoided during all seasons.

Definition of Impacts

The following should be considered impacts to the species:

- Disturbance within 50 meters (approx. 160 ft.) Which may result in harassment of owls at occupied burrows;
- Destruction of natural and artificial burrows (culverts, concrete slabs and debris piles that provide shelter to burrowing owls); and
- Destruction and/or degradation of foraging habitat adjacent (within 100 m) of an occupied burrow(s).

Written Report

A report for the project should be prepared for the Department and copies should be submitted to the Regional contact and to the Wildlife Management Division Bird and Mammal Conservation Program. The report should include the following information:

- Date and time of visit(s) including name of the qualified biologist conducting surveys, weather and visibility conditions, and survey methodology;
- Description of the site including location, size, topography, vegetation communities, and animals observed during visit(s);
- Assessment of habitat suitability for burrowing owls;
- Map and photographs of the site;
- Results of transect surveys including a map showing the location of all burrow(s) (natural or artificial) and owl(s), including the numbers at each burrow if present and tracks, feathers, pellets, or other items (prey remains, animal scat);
- Behavior of owls during the surveys;
- Summary of both winter and nesting season surveys including any productivity information and a map showing territorial boundaries and home ranges; and
- Any historical information (Natural Diversity Database, Department regional files? Breeding Bird Survey data, American Birds records, Audubon Society, local bird club, other biologists, etc.) regarding the presence of burrowing owls on the site.

Mitigation

The objective of these measures is to avoid and minimize impacts to burrowing owls at a project site and preserve habitat that will support viable owls populations. If burrowing owls are detected using the project area, mitigation measures to minimize and offset the potential impacts should be included as enforceable measures during the CEQA process.

Mitigation actions should be carried out from September 1 to January 31 which is prior to the nesting season (Thomsen 1971, Zam 1974). Since the timing of nesting activity may vary with latitude and climatic conditions, this time frame should be adjusted accordingly. Preconstruction surveys of suitable habitat at the project site(s) and buffer zone(s) should be conducted within the 30 days prior to construction to ensure no additional, burrowing owls have established territories since the initial surveys. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site should be resurveyed.

Although the mitigation measures may be included as enforceable project conditions in the CEQA process, it may also be desirable to formalize them in a Memorandum of Understanding (MOU) between the Department and the project sponsor. An MOU is needed when lands (fee title or conservation easement) are being transferred to the Department.

Specific Mitigation Measures

1. Occupied burrows should not be disturbed during the nesting season (February 1 through August 3 1) unless a qualified biologist approved by the Department verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

2. To offset the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of foraging habitat (calculated on a 100 m {approx. 300 ft.} foraging radius around the burrow) per pair or unpaired resident bird, should be acquired and permanently protected. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to the Department. *Protection of additional habitat acreage per pair or unpaired resident bird may be applicable in some instances.* The CBOC has also developed mitigation guidelines (CBOC 1993) that can be incorporated by CEQA lead agencies and which are consistent with this staff report.

3. When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected lands site. One example of an artificial burrow design is provided in Attachment A.

4. If owls must be moved away from the disturbance area, passive relocation techniques (as described below) should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and allow the owls to acclimate to alternate burrows.

5. The project sponsor should provide funding for long-term management and monitoring of the protected lands. The monitoring plan should include success criteria, remedial measures, and an annual report to the Department.

Impact Avoidance

If avoidance is the preferred method of dealing with potential project impacts, then no disturbance should occur within 50 meters (approx. 160 ft.) of occupied burrows during the nonbreeding season of September 1 through January 31 or within 75 meters (approx. 250 ft.) during the breeding season of February 1 through August 31. Avoidance also requires that a minimum of 6.5 acres of foraging habitat be *permanently* preserved contiguous with occupied burrow sites for each pair of breeding burrowing owls (with or without dependent young) or single unpaired resident bird. The configuration of the protected habitat should be approved by the Department.

Reproductive Success of Burrowing Owls Using Artificial Nest Burrows in Southeastern Idaho

by Bruce Olenick

Artificial nest burrows were implanted in southeastern Idaho f'or burrowing owls in the spring of 1986. These artificial burrows consisted of a 12" x 12" x 8" wood nesting chamber with rernovable top and a 6 foot corrugated and perforated plastic drainage pipe 6 inches in diameter (Fig. 1). Earlier investigators claimed that artificial burrows must provide a natural dirt floor to allow burrowing owls to modify the nesting tunnel and chamber. Contrary to this, the artificial burrow introduced here does not allow owls to modify the entrance or tunnel. The inability to change the physical dimensions of the burrow tunnel does not seem to reflect the owls' breeding success or deter them from using this burrow design.

In 1936, 22 artificial burrows were inhabited. Thirteen nesting attempts yielded an average clutch size of 8.3 eggs per breeding pair. Eight nests successfully hatched at least 1 nestling. In these nests, *67 of 75* eggs hatched (59.3%) and an estimated 61 nestlings (91.0%) fledged. An analysis of the egg laying and incubation periods showed that incubation commenced well after egg laying bega. Average clutch size at the start of incubation was 5.6 eggs. Most eggs tended to hatch synchronously in all successful nests.

Although the initial cost of constructing this burrow design may be slightly higher than a burrow consisting entirely of wood, the plastic pipe burrow offers the following advantages: (1) it lasts several field seasons without rotting or collapsing; (2) it may prevent or retard predation; (3) construction time is minimal; (4) it is easy to transport, especially over long distances; and (5) the flexible tunnel simplifies installation. The use of this artificial nest burrow design was highly successful and may prove to be a great resource technique for future management of this species.

For additional information on constructing this artificial nest burrow, contact Bruce Olenick, Department of Biology, Idaho State University, Pocatello, ID 83209.

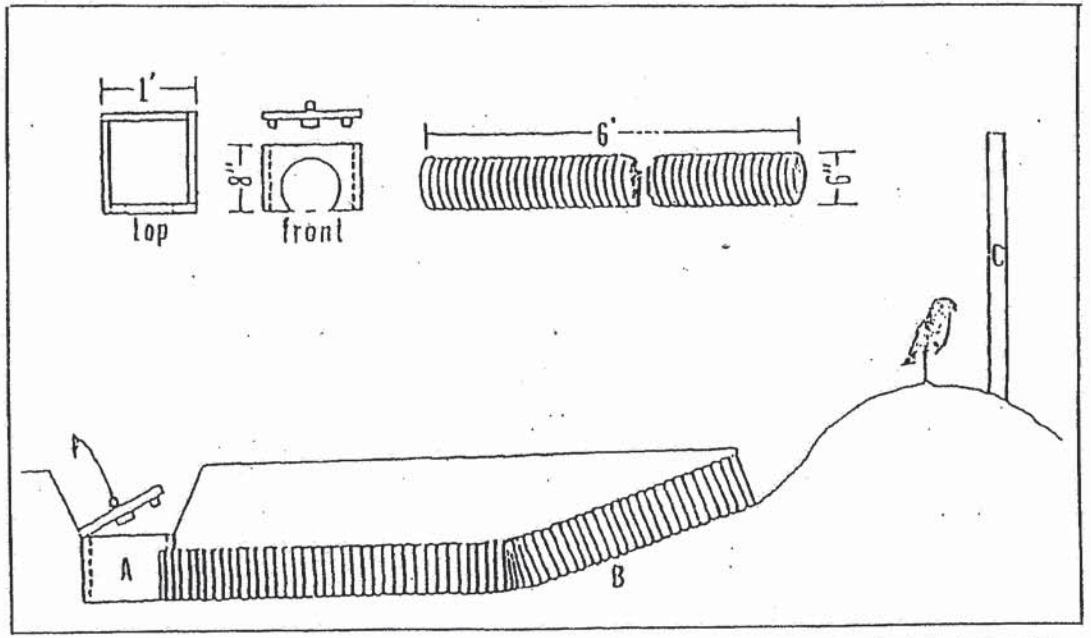

fig. 1 Artificial nest burrow design for burrowing owls Entire unit (including nest chamber) is burled 12" -- 18" below ground for maintaining thermal stability of the nest chamber. A= nest chamber, B = plastic pipe. C = perch.

APPENDIX G

SUGGESTED STEPS FOR INITIATING AN ACTIVE RELOCATION PROGRAM

APPENDIX G

SUGGESTED STEPS FOR INITIATING AN ACTIVE RELOCATION PROGRAM

1. **Reintroduction Site Selection.** Selection of an appropriate location for the reintroduction site is critical to the success of the program. Several habitat evaluation factors need to be taken into account when choosing a site. The following criteria should be used to determine "suitability" of any considered site. Properties containing any combination of these criteria can be considered suitable. The more criteria a property has; the higher quality or more suitable the habitat is.

   - Short, native or non-native grassland (prairies, pastures, meadows, and some agricultural fields);
   - Flat terrain;
   - Ground squirrel burrow complexes (or artificial irrigation-type pipes), particularly mounds;
   - Minimum raptor perches (tall trees, utility poles, etc.);
   - Open, bare areas; and
   - Berms or creek banks.

2. **Assessment of Prey Species.** A general assessment of available prey species should be conducted of any site considered for the reintroduction program. If available prey is low due to previous agricultural activities (pesticides, disking, etc.), inoculation of the site with suitable prey species and ground squirrel may be needed.

3. **Construction of Enclosures.** An enclosure will need to be created for each pair of owls to be relocated. Each enclosure should be about 20 feet x 20 feet and approximately 6 to 8 feet high. Metal poles and netting is normally used to construct enclosures. Enclosure sites should be placed in areas with active or inactive squirrel burrows and should be approximately 100 feet apart from each other if more than one pair are to be relocated at one time. One artificial burrow per enclosure will also be constructed to avoid potential competition between squirrels and owls. Estimated cost of each enclosure is $1,000. An enclosure remains in place until the pair of burrowing owls have acclimated to the new site, usually 1-4 months and can be reused for subsequent relocation efforts.

4. **Trapping of Burrowing Owls.** The following are general considerations for sites to be trapped for relocation purposes:

   a) Occupied burrows should not be disturbed during the nesting season, from February 15 through August 31, or until it is determined by CDFG that the birds are not nesting or rearing young. This is usually verified by use of a fiber-optic camera by a qualified,

approved biologist. However, it is recommended that owls be moved between December 15 and February 28.

b) Active burrows will be monitored by a qualified biologist for one week prior to any relocation activity to ensure all young have fledged and/or the nest is not active. At this time of year, adults are within the courtship period. Females may be preparing to lay eggs, thus fidelity to the new site will be stronger when both male and female are moved to the new site.

c) Once it has been established that no young are within the nest, the owls will be trapped using a noose carpet or bow-net by a qualified permitted biologist.

d) The captured owls will be banded using USFWS metal bands *and* colored bands then transported in a small padded kennel (such as a cat kennel) with windows covered.

e) Once owls have been trapped and relocated to the reintroduction enclosures, existing burrows will be systematically collapsed.

5. **Biological Monitoring of Relocated Burrowing Owls.** Biological monitoring of burrowing owls will be conducted on a daily basis during the breeding season and while the owls are in captivity. Supplemental feeding will be conducted daily (two mice and five crickets per day per bird) while owls are within the enclosure. Once released, food will be gradually diminished to zero over time. Estimated cost for food is $5/owl/day, as well as monitoring (approximately $100/day). It is estimated that the owls will be in the enclosures for a minimum of 6 weeks and up to a maximum of 4 months.

6. **Release from Enclosures.** Once owls have laid eggs, enclosures will be taken down. If pairs have not laid eggs, it is recommended that enclosures and supplemental feeding be maintained until the owls have been in captivity for 1-4 months, depending on behavior of the owls and the status of the development project.

7. **Habitat Maintenance.** A Relocation Area will need to be inspected bi-monthly to ensure the site is free of vandalism, that the habitat is maintained suitable and to monitor the health and success of the owls.

8. **Relocation Costs.** Total estimated cost to actively relocate one pair of owls is approximately $15,000. Expenses are the responsibility of the applicant or developer.

9. **Annual Reporting.** An annual report will be submitted to CDFG, USFWS and the City of Chino each year that owls are relocated. Reports will include the following data:

- Number of owls relocated, band numbers, and color bands;
- Location from where owls were taken and associated project name;
- Dates owls were relocated;
- Nesting success data (nesting attempts, eggs laid, eggs hatched, chicks fledged);
- Predation and types of predators seen onsite;
- Use of artificial burrows versus squirrel burrows; and
- Any other pertinent data needed to evaluate success of the program.

APPENDIX H

MITIGATION FEE ESTABLISHMENT AND INCLUDED COSTS

BIOLOGICAL RESOURCES BASELINE CONDITIONS REPORT FOR SUBAREA 2 OF THE CHINO VALLEY DAIRY PRESERVE

Prepared for:

City of Chino
Community Development Department
13220 Central Avenue
Chino, CA

Prepared by:

Michael Brandman Associates
15901 Red Hill Avenue, Suite 200
Costa Mesa, CA 92626

March 2000

BIOLOGICAL RESOURCES

1.0 INTRODUCTION

This report describes the existing biological resources identified by Michael Brandman Associates (MBA) in February and March 2000. This report includes existing biological character of the site in terms of plant communities, flora, wildlife and wildlife habitats, provides an assessment of the sensitive resources found on the site, and analyzes the biological significance of the site in relation to federal, state, and local laws and policies.

The Corona Sub Area 2 site is located in the along the southwestern border of the County of San Bernardino. The site begins at the intersection of Merril Avenue and Carpenter Street. The boundary continues south along Carpenter Street to the intersection of Remington Street. Here the boundary turns east along Remington Street to the intersection of Remington Street and the County of San Bernardino line. The boundary turns and follows the County line southwest. A small turn in the County line soon redirects the boundary due south. As the County line crosses Schleisman Road, the County line is represented by Hellman Avenue. Continuing south beyond the intersection of River Road, the Hellman Avenue becomes an unimproved dirt road. The dirt road turns sharply west and passes the Orange County Water District Field Office, still representing the County line. Following this line of sight due west across the Prado Basin and adjacent undeveloped areas, the County line meets State Highway 71. At this point the site boundary follows the alignment of State Highway 71 northwest. The site boundary turns northeast and follows State Highway 83/Euclid Avenue at the intersection of State Highway 71 and State Highway 83/Euclid Avenue. The boundary follows the general northerly direction of Euclid Avenue until the intersection of Euclid Avenue and Kimball Avenue, where the boundary turns to the east along Kimball Avenue. At the intersection of Kimbell Avenue and Cucamonga Avenue, the boundary turns north along Cucamonga Avenue, turns east in the airport, and finally turns north along Grove Avenue alignment. When Grove Avenue and Merril Avenue intersect, the boundary turns east and follows Merril Avenue back the original intersection of Merril Avenue and Carpenter Street.

The site is located within the County of San Bernardino and is proposed to be annexed into the City of Chino (Exhibit 1). The site is 5,400 acres in size and would be developed as a residential communities. The site is depicted on the U.S. Geological Survey (USGS) Prado Dam and Corona North Quadrangles, California, Township 2S, Range 7W, sections 21, 22, 27, 28, 31, 32, and 33, Township 3S, Range 7W, sections 4, 5, 6, 7, 8, and 9 (both quadrangles dated 1966 and photo revised in 1981)(Exhibit 2). General land uses in the area include dairy lands, residential, agricultural, flood control, and natural areas.

Documents used in preparing this section include:

2.0 ENVIRONMENTAL SETTING

TOPOGRAPHY AND SOILS

The Chino Sub Area 2 site is a 5,400 acre parcel in the unincorporated portion of southwestern San Bernardino County, California. The southwestern portion of the site is occupied by Prado Regional Park. The park includes the areas surrounding Prado Lake, Chino Creek, and the Prado Recreational Dog Training Facility. The area immediately surrounding Prado Lake is vegetated with ornamental trees. However, raptor and water fowl utilization is prevalent throughout the park. South and

southeast of the Prado Lake area are fallow fields. These fallow fields may provide foraging habitat for raptors and habitat for general wildlife species. The spillway for Prado Lake (contained behind two dams) drains south-southeast into Chino Creek near the southern boundary of the site. Before entering the site at the western boundary, Cypress Channel merges into Chino Creek. Chino Creek flows under State Highway 83/Euclid Avenue southeast and continues beyond the southern boundary of the site. This drainage is generally found cutting across the southwestern corner of the site. Due south of Prado Lake, beyond Chino Creek, is the Prado Recreation Dog Training Facility. This facility includes three small ponds. The park continues from the Prado Lake vicinity southwest until the alignment of Mill Creek to the east. The northern edge of Prado Regional Park is lined by dairy related land uses.

Along the western site boundary, northeast of the intersection of Hellman Avenue and Corona Road, the Cucamonga Creek Flood Control Channel enters the site. Here at the eastern border of the site, the drainage converts from a concrete lined drainage to natural bottom. Also, the drainage is referred to as Mill Creek from this point south. The drainage flows south-southeast and enters into Orange County Water District's denitrification ponds just beyond the southern boundary of the Chino Sub Area 2 boundary. Mill Creek is generally found cutting across the southeastern corner of the Chino Sub Area 2 site. Chino Creek and Mill Creek form a general "V" shape, converging in Prado Basin to the south of the Chino Sub Area 2 site. Both Mill Creek and Chino Creek are lined with riparian habitats.

Between Mill Creek and the Chino Sub Area 2 site boundary to the southeast lies dairy and agricultural lands. The northern half of this area is occupied by dairy lands and one plant nursery. The impacts within the dairy areas were extremely high. Drainages in this area were completely impacted, mostly with a series of detention basins. The southern half of this area was utilized for agricultural purposes. One small recreational paint gun facility is operating along McCarty Road, immediately east of Mill Creek. The southern site boundary is identified by the Orange County Water District's field office and Raugans's shooting range. Northeast of the shooting facility on the western side of Mill Creek is an old olive orchard. Recent fires have burned portions of the orchard and the riparian corridor lining Mill Creek.

At the center of the Chino Sub Area 2 site is the California Institute for Women. The remaining lands within the Chino Sub Area 2 site, north of the Prado Regional Park, are utilized for dairies and dairy associated uses. The dairies typically include a series of shelters for the cattle, milking stations, processing buildings, and other dairy related facilities. The ground cover in these areas is typically comprised of barren soil, with excessive amounts of cattle waste. Vegetation within the dairy compounds tends to be non-native ornamental plants and grazing fields. Some remnant Eucalyptus windrows still occur within the dairies. The topography within the dairy areas is generally flat with a general south oriented downward slope towards Prado Basin to the south. Most of the small drainages have been heavily impacted and in most cases is being currently disturbed and channelized. The habitats in this area exhibit poor conditions for most wildlife and the extremely high concentration of cattle waste has compromised the health of the stock ponds, detention basins, and natural low areas in the region. Most of the standing water within the dairy areas was not being utilized by water fowl. Though the site survey were early for the spring migratory season, resident birds would have been expected in higher numbers assuming these aquatic sources were of higher quality. The southern boundary of the dairy lands generally follows the northern boundary of the Prado Regional Park, skirting east to Mill Creek and then occupying the areas east of Mill Creek south to the site boundary.

LITERATURE REVIEW RESULTS AND ENVIRONMENTAL POLICY

Prior to initial field investigations, MBA ecologists reviewed the results of an extensive literature review to determine the potential resources that may be encountered on the subject property. The literature review began with a review of relevant literature on the biological resources of the study area and the surrounding vicinity. The CDFG's Natural Diversity Database and California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California were reviewed for all pertinent information regarding the localities of known observations of sensitive resources in the vicinity of the subject property. A list of "potential" species was derived from those species identified by the CNDDB, CNPS Electronic Inventory, recommendations of regulatory agencies, and the experience of biologists/ecologists conducting the field investigations. The federal register listings, protocols, and species data provided by the USFWS were reviewed in conjunction with anticipated federally listed species potentially occurring within the vicinity. The CDFG documentation on state sensitive species was also reviewed.

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The CDFG, the USFWS, and special groups like the CNPS maintain watch lists of such resources. All resources utilized in this study are listed in Section 6, References.

Federal Protection and Classifications

Federal Endangered Species Act (FESA)

The Federal Endangered Species Act of 1973 defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range ..." Threatened species are defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined as follows in Section 3(18) of the Act: "... harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of "take". These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action which could affect a federally-listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the federal Endangered Species Act addresses the protections afforded to listed plants.

For purposes of this assessment the following acronyms are used for federal status species:

FE - Federally listed as Endangered
FT - Federally listed as Threatened
FPE - Federally proposed for listing as Endangered
FPT - Federally proposed for listing as Threatened
FPD - Federally proposed for delisting
FC - Federal candidate species
FSC - Federal species of concern

Clean Water Act (CWA)

Pursuant to Section 404 of the Clean Water Act, the United States Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined at 33 CFR Part 328 as: (1) all navigable waters (including all waters subject to the ebb and flow of the tide); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above.

In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as rivers, lakes and intermittent streams, extend to the ordinary high water mark (OHWM), which is defined at 33 CFR 328.3(e) as:

... that line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Typically in Southern California, the OHWM is indicated by the presence of an incised streambed with defined bank shelving. However, in court cases the interpretation of the lateral extent of the OHWM, various criteria have been used, including vegetation and soil characteristics.

If the water of the United States consists only of wetlands, the limits of USACE jurisdiction extends to the limit of the wetlands which is defined at 33 CFR 328.3 (b) as:

... those areas that are inundated, or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

The definition of wetlands has increasingly been interpreted by the USACE to extend beyond the original concept of wetlands as swamps, marshes, and bogs to encompass much drier areas, including some hardwood forests, fields, and cultivated farmland, that may be saturated with rain water for short periods of time during the course of a year.

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act protects all common wild birds found in the United States except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkeys. Resident game birds are managed separately by each State. A reference list of migratory game birds is found in Title 50, Code of Federal Regulations, Part 10. The Bald Eagle Protection Act provides further protection to all Bald and Golden eagles. The Endangered Species Act further protects endangered species like the Peregrine falcon, the Northern spotted owl, and the Bald Eagle.

The Migratory Bird Treaty Act makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird, including feathers, parts, nests, or

eggs. The Bald Eagle Protection Act prohibits all commercial activities and some non-commercial activities involving Bald or Golden eagles, including their feathers or parts. The Endangered Species Act makes it illegal to sell, harm, harass, possess or remove protected animals from the wild.

State of California Protection and Classifications

California Endangered Species Act (CESA)

California's Endangered Species Act defines an endangered species as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "... a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "... a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the federal ESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of the California Endangered Species Act addresses the taking of threatened or endangered species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided..." Under the California Endangered Species Act, "take" is defined as " ...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require "... permits or memorandums of understanding..." and can be authorized for "... endangered species, threatened species, or candidate species for Scientific, educational, or management purposes." Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

Additionally, some sensitive mammals and birds are protected by the state as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern ("special" animals and plants) listings include special status species, including all state and federal protected and candidate taxa, Bureau of Land Management (BLM) and United States Forest Service (USFS) sensitive species, species considered to be declining or rare by the California Native Plant Society or National Audubon Society, and a selection of species which are considered to be under population stress but are not formally proposed for listing. This list is primarily a working document for the CDFG's CNDDB project. Informally listed taxa are not protected per se, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

SE - State listed as Endangered
ST - State listed as Threatened
SCE - State candidate for listing as Endangered
SCT - State candidate for listing as Threatened
FP - State Fully Protected
P - State Protected
CSC - California Special Concern Species

Special Interest Groups Protection and Classifications

California Native Plant Society (CNPS)

The California Native Plant Society is a California resource conservation organization that has developed an inventory of California's sensitive plant species (Skinner and Pavlik 1994). This inventory is the summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory is comprised of four lists.

1A- Presumed extinct in California
1B- Rare or Endangered in California and elsewhere
2- Rare or Endangered in California, more common elsewhere
3- Plants for which we need more information – review list
4- Plants of limited distribution watch list

Resource Agency Policies and Regulations

Federal authorization of incidental take of a listed species by a private individual or private entity is granted in one of the following ways:

- ESA Section 7 Permit: Applies to federal agencies undertaking an action (i.e., permit or license issuance or federal funding) that may affect an endangered species or a proposed species (or habitat).[4] Federal agencies are obligated to consult with the USFWS regarding proposed actions before issuing permits. Consultation between the "action agency" and USFWS may be formal or informal if it is determined that the agency action is not likely to adversely affect listed or proposed species or critical habitat. Private applicants may participate in the process, in accordance with USFWS regulations.
- ESA Section 10(a) Permit: Applies if project implementation is anticipated to result in incidental take (i.e., inadvertent and incidental to otherwise lawful activities) of federally-listed endangered and threatened species by non-federal entities. As issuance of an incidental take permit is a federal action subject to the National Environmental Policy Act (NEPA), a Habitat Conservation Plan (HCP) and accompanying NEPA documentation (Environmental Assessment and Environmental Impact Statement or Finding of No Significant Impact) must be prepared and submitted to USFWS for approval prior to permit issuance. In Riverside County, a countywide HCP and "blanket" 10(a) permit already exist for the incidental take of the Stephens' kangaroo rat (Dipodomys stephensi). Therefore, incidental take requires only habitat acreage-based fee payment to the Riverside County Habitat Conservation Authority, the permit-issuing authority.

[4] *16 U.S.C. & 1536 (a)(2); 50 CFR & 402.14.*

- ESA Special Rule, Section 4(d): USFWS may initiate a special rule to allow incidental take of a threatened species in conjunction with a state-initiated plan (i.e., NCCP, MSHCP). Although a Multi-Species Habitat Conservation Plan (MSHCP) exists for western Riverside County, focused on the Stephens' kangaroo rat, and thus a Section 10 (a)(1)(b) permit, the County is nonetheless subject to Section 10 of the ESA with regard to the California gnatcatcher.
- CDFG Section 2081.5: CDFG is authorized to issue a permit or Memorandum of Understanding or approve or enter into an NCCP, HCP, Habitat Management Plan (HMP) or amendment thereto if the conditions of Section 2081 are met. *Such conditions include the following:*
  - *The take is incidental to an otherwise lawful activity.*
  - *The impacts of the take shall be minimized and fully mitigated. The measure required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species.*
  - *The permit is consistent with any regulations adopted pursuant to Section 2112 and 2114.*

FIELD RECONNAISSANCE RESULTS

Habitat Classification and Natural Community Mapping

Natural communities identified as occurring on the site included native riparian woodlands, non-native pastures and fields, and a variety of disturbance related designations. The acreage of each community onsite is located in Table 1. Exhibit 3 illustrates the location of the natural communities on the site. These communities are grouped into designations of high, medium, and low sensitivity areas as shown in Exhibit 4.

TABLE 1
NATURAL COMMUNITIES ON THE CHINO SUB AREA 2 SITE,
SAN BERNARDINO COUNTY, CALIFORNIA

Natural Community	Area (acres)
Fallow	516.102
Agriculture	570.850
Dairy	1441.216
Developed	472.403
Disturbed	43.210
Equestrian	52.240
Detention Basins/Drainages	88.791
Marsh	23.565
Open Water	63.418
Pasture	1687.776
Riparian Woodland	549.431
Windrows	24.231
Total	**5533.233**

High Sensitivity Habitats

Riparian Woodland (NA) (acres)

The riparian woodland contains dense, broadleaved, winter-deciduous riparian thickets dominated by several willow species and is associated with seasonally flooded or saturated stream and river corridors. It typically forms thickets in riparian zones along alluvial fan stream channels, adjacent sandy or gravelly floodplains, and low stream terraces in southern California. The riparian woodland is an early seral community to southern cottonwood-willow riparian forest. Most stands are too dense to allow much under story development. Characteristic species of this community include black willow (*Salix gooddingii*), Arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and mulefat (*Bacharis salicifolia*).

Detention Basins/Drainages (NA) (acres)

Detention basins were identified throughout the site. These basins varied in quality based on the dairy related impacts. The majority of the basins are created to control dairy activity run-off. At the lower elevation portions of the individual properties, the owners create small detention basins. These basins accumulate the surface flow from the dairy after heavy rains. Consequentially, the water quality of the basins reflects the high concentration of cattle in the area. In some cases, these basins have been placed in what may have historically been drainages and areas potentially regulated by the United States Army Corps of Engineers and California Department of Fish and Game. One small detention basin occurs in the southern portion of the site. This basin is a result of pumped water and does provide some use to waterfowl and amphibian species.

Open Water (NA) (acres)

These habitats include the Prado Lakes. This habitat provides foraging habitat for raptors and other wildlife species.

Marsh (NA) (acres)

The marsh habitats occur adjacent to the riparian corridors of Chino and Mill Creeks. These habitats potentially host a variety of special status species including waterfowl.

Medium Sensitivity Habitats

Fallow (NA) (acres)

Fallow fields cover the southwestern portion of the site. These fields appear to be fallow agricultural fields. Some fields appear to have recent discing activities, most likely for fire prevention. These habitats are likely used as foraging habitat by local raptor species.

Windrows (NA) (acres)

Windrows are typically a result of historic agricultural activities. The windrows are dominated by blue gum (*Eucalyptus globoratum*). These communities though comprised of non-native species, typically provide an element of historical significance. Eucalyptus windrows on the site are located both within the dairy preserve and the riparian woodland designations. These habitats provide nesting and foraging perches for bird and raptor species.

Low Sensitivity Habitats

Agricultural (NA) (acres)

The agricultural fields onsite are composed of domestic grain production. These areas are comprised of nearly homogenous stands of domestic grains. However, many □weedy□ species have invaded these areas. Weedy species typically found throughout the fields included wild oat (*Avena* sp.), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus hordeaceus*), black mustard (*Brassica nigra*), red-stemmed filaree (*Erodium cicutarium*), and cheeseweed (*Malva parviflora*). Two areas of rock outcropping are included in the acreage of the agricultural areas.

Dairy (NA) (acres)

The dairy areas include many different characteristics. These areas are extremely impacted. Native vegetation does not occur within these areas. The only vegetation within the dairy lands is planted ornamental landscaping, and grazing fields of introduced opportunistic weedy species. Bird activity is relatively high within these areas, but bird diversity however is quite low. Bird species occurring within the dairies are dominated by brewer's blackbird (*Euphagus cyanocephalus*), European starling (*Sturnus vulgaris*), and brown-headed cowbirds (*Molothrus ater*), the later two are introduced and undesirable species.

Developed (NA) (acres)

Areas designated as developed refer to permanent structures or commercial utilizations. Within the study area these uses include the California Institute for Women, Prado Regional Park, Prado Recreational Dog Training Facility, Chino Airport, and commercial nurseries.

Disturbed (NA) (acres)

Two areas are designated as disturbed a commercial paint gun facility and a heavily disturbed parcel southeast of Chino Airport.

Equestrian (NA) (acres)

Two equestrian facilities occur within the Chino Sub Area 2 site. These facilities appear to produce lower impacts on natural resources than the dairy lands. The equestrian facilities are clean and well maintained. These areas are devoid of natural vegetation communities. Most areas have clean soil surfaces due to the constant impact of the horses and pedestrian traffic. These area provide little habitat for wildlife and are of low environmental quality.

Pasture (NA) (acres)

Open pasture areas occur throughout the dairy lands. These pastures are comprised mostly of opportunistic weedy species. Dominant genera in non-native grassland include brome and chess (*Bromus* sp.), wild oat *(Avena sp.),* fescue (*Vulpia* sp.), and barley (*Hordeum* sp.). Many species of native forbs and bulbs, as well as naturalized annual forbs, are also found in non-native grassland. Floristic richness is affected to a high degree by land use activity, such as intensity and duration of grazing, fires, or other disturbances. Heavily-grazed grasslands, in particular, exhibit reduced species richness. Common forbs include common fiddle neck (*Amsinckia menziesii*), cryptantha (*Cryptantha*

sp.), red-stemmed filaree (*Erodium cicutarium*), mustard (*Brassica* sp.), tocalote (*Centaurea melitensis*), fascicled tarweed (*Hemizonia fasciculata*), cardoon (*Cynara cardunculus*), milk thistle (*Silybum marianum*), peppergrass (*Lepidium* sp.), dove weed (*Eremocarpus setigerus*), and California bur clover (*Medicago polymorpha*).

GENERAL FLORAL RESULTS

The plant communities form the basis of the wildlife habitats of the site. They provide the primary plant productivity upon which wildlife depends, along with nesting and denning sites, escape cover and protection from adverse weather. Many of the wildlife species that occur in the area use several of the plant communities to obtain all their life history needs. In general, more complex plant communities (with more layers of vegetation and more species), have more niches for wildlife and so provide higher value wildlife habitat than less complex vegetation communities. More complex plant communities usually support more animal species than less complex communities. Although simple plant communities may support few wildlife species, they may provide habitat for large numbers of those few species.

SENSITIVE FLORAL RESULTS

Sensitive plants include those listed, or candidates for listing by USFWS, CDFG, and CNPS (particularly list 1A, 1B, and 2). Several sensitive plant species were reported in the CNDDB from the vicinity. A discussion of each sensitive species recognized by the CNDDB and MBA as potentially present on the property is presented below.

Intermediate Mariposa Lily (*Calochortus weedii* var. *intermedius*) FSC, CNPS List 1B. Intermediate mariposa lily is a perennial herb generally associated with coastal sage scrub, chaparral, and grasslands.

many-stemmed dudleya (*Dudleya multicaulis*) FSC, CNPS List 1B. Many-stemmed dudleya is a succulent perennial herb generally associated with clay soils in chaparral, grasslands, and coastal sage scrub. This plant blooms between May and July.

Santa Ana River woollystar (*Eriastrum densifolium ssp. sanctorum*) FE, SE, CNPS List 1B. The Santa Ana River woollystar is an erect, many branched, bright blue flowered, perennial herb. It is found within the Santa Ana River drainage on sandy soils of river floodplains and terraced alluvial deposits.

Coulter's saltbrush (*Atriplex coulteri*) CNPS List 1B. Coulter's saltbrush is a perennial herb, spreading, leafy, and branched 3 feet high. This plant is found on alkaline soil in grassland and coastal sage scrub. The saltbrush blooms between March and October.

GENERAL FAUNAL RESULTS

The natural communities discussed above provide wildlife habitat. While a few wildlife species are entirely dependent on a single natural community, the entire mosaic of all the natural communities within the study area and adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the study area and as part of the regional ecosystem. Following are discussions of wildlife populations on the property, segregated by taxonomic group. Representative examples of each taxonomic group either observed or expected on the property are provided. Wildlife species actually observed, as well as those expected to occur, within the study area are indicated in Appendix

A, Floral and Faunal Compendia. Sensitive wildlife species occurring or potentially occurring within the area are discussed in Section 3.3.5, Sensitive Faunal Results.

Invertebrates

General surveys for invertebrate species were performed. Butterfly and other insect activity was lower than anticipated. All invertebrate species observed and identified were recorded and are included in Appendix B, Floral and Faunal Compendia. Sensitive invertebrate species occurring or potentially occurring on the property are discussed in Section 3.3.5, Sensitive Faunal Results.

Amphibians

The potential presence of amphibians varies greatly between habitats within the study area. Terrestrial species may or may not require standing water for reproduction. Terrestrial species avoid desiccation by burrowing underground; within crevices in trees, rocks, and logs; and under stones and surface litter during the day and dry seasons. Due to their secretive nature, terrestrial amphibians are rarely observed, but may be quite abundant if conditions are favorable. Aquatic amphibians are dependent on standing or flowing water for reproduction. Such habitats include fresh water marshes and open water (reservoirs, permanent and temporary pools and ponds, and perennial streams). Many aquatic amphibians will utilize vernal pools as nesting sites. These pools are temporary in duration and form following winter and spring rains common to southern California. The property has the potential to support a variety of amphibians in the moister woodland areas and canyon bottoms. All amphibian species observed and identified were recorded and are included in Appendix B, Floral and Faunal Compendia. Sensitive amphibian species occurring or potentially occurring on the property are discussed in Section 3.3.5, Sensitive Faunal Results.

Reptiles

Reptilian diversity and abundance typically varies with habitat type and character. Some species prefer only one or two natural communities; however, most will forage in a variety of communities. A number of reptile species prefer open habitats that allow free movement and high visibility. Most species occurring in open habitats rely on the presence of small mammal burrows for cover and escape from predators and extreme weather.

The property has many essential reptilian habitat characteristics and possesses the potential to support a wide variety of species. All reptile species observed, as well as those expected to occur on the property, are included in Appendix B, Floral and Faunal Compendia. Sensitive reptile species occurring or potentially occurring on the property are discussed in Section 3.3.5, Sensitive Faunal Results.

Avian

The scrub land, woodland, and riparian habitats on the property provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. The overall condition of these communities on the property is good and mostly undisturbed. In addition, there are several canyons and washes within and adjacent to the property that can provide a steady water supply for birds. The combination of these resources as well as the confluence of many community types provides for a high diversity of bird species. All avian species observed, as well as those expected to occur on the property, are included in Appendix B, Floral and Faunal Compendia. Sensitive bird species occurring or potentially occurring on the property are discussed in Section 3.3.5, Sensitive Faunal Results.

Much of the habitat within the property provides optimal foraging opportunities and breeding areas for raptors. Trees found throughout the property provide perches for foraging over the woodland, chaparral, and coastal sage scrub natural communities. The various natural communities on the property provide excellent habitat for many small mammals resulting in a potentially large rodent population. Collectively, the abundance of prey and the availability of both perches and nesting sites would suggest that the property is being used by a variety of raptor species. All raptor species observed, as well as those expected to occur on the property, are included in Appendix B, Floral and Faunal Compendia. Sensitive raptor species occurring or potentially occurring within the area are discussed in Section 3.3.5, Sensitive Faunal Results.

Mammals

The diversity of habitats on the property is anticipated to support a variety of mammals. Mammal presences was deduced by diagnostic signs (track, scat, burrows, etc.). All mammals observed on the property, as well as those expected to occur, are listed in Appendix B, Floral and Faunal Compendia. Sensitive mammal species occurring or potentially occurring within the area are discussed in Section 3.3.5, Sensitive Faunal Results.

SENSITIVE FAUNAL RESULTS

Sensitive wildlife includes those listed, or candidates for listing by USFWS and CDFG. Several sensitive wildlife species were reported in the CNDDB from the vicinity. A discussion of each sensitive species recognized by the CNDDB and MBA as potentially present on the property is presented below.

Endangered and Threatened Species

Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) FE. The Delhi Sands flower-loving fly is endemic to the Colton Dunes (Delhi series soils) in areas that contain suitable conditions for the subterranean early stages, adult nectar sources, and adult feeding, breeding, and perching areas. Soil and climatic conditions, and other ecological and physical factors contribute to the maintenance of open sand areas within the species' range. Urban development, agricultural conversion, sand mining, invasion by exotic species, dumping of cow manure and trash have caused significant loss and modification of the species' habitat. Other threats include off-road vehicles and collecting.

Several correlations have been noted between the fly and vegetation within its habitat, as follows: 1) three indicator plant species are usually present in occupied Delhi Sands flower-loving fly habitat: California buckwheat (*Eriogonum fasiculatum*), telegraphweed (*Heterotheca grandiflora*), and California croton (*Croton californicus*). The plants may be present in low density, as exemplified by only three buckwheat plants on two occupied habitat patches. 2) Adults do not appear to use areas of dense vegetation, either of buckwheat or where annual grasses provide more than 50 percent cover. 3) Sightings of adults are more likely in relatively undisturbed habitats, as indicated by the presence of native annuals and perennials, including *Eriastrum sapphmrinum*, *Opuntia parryi*, two annual buckwheats, and a suite of other native plant species and/or its habitat.

Quino checkerspot butterfly (*Euphydryas editha quino*) FE. The Quino checkerspot's current known distribution is in the coastal plains and inland valleys in portions of Riverside and San Diego counties and northwestern Baja California. The species' historic range includes areas of southern California and Baja California, and portions of San Diego, Orange, Los Angeles, and western Riverside counties. This species is threatened by one or more of the following factors: habitat loss and fragmentation due

to urban development, overcollection and other human disturbances, drought, fire, or other weather extremes, and by the displacement of the primary larval food plant by non-native grasses and other weedy annuals.

The Quino checkerspot butterfly exists in low elevation (sea level to 3,000 ft.) open grasslands and sunny openings within shrubland habitats, and is usually associated with clay soils or deposits of cryptogamic plants. The cryptogamic plants develop a hard crust which is occupied by low growing herbaceous annuals including the Quino larvae's primary food plant, dwarf plantain and the larvae's additional food plant, owl's clover. The Quino checkerspot is found only in areas where are there are fairly dense stands of one or both of the larvae's food plants.

Adult Quino checkerspot butterflies live from 4 to 8 weeks and are in flight from approximately late January to mid-May. Courtship behavior consists of male butterflies hill topping on open or sparsely vegetated rounded hilltops, ridgelines, and rocky outcrops. Adults sun themselves at the base of hills and have been observed flying through areas of unsuitable habitat, most likely dispersing to sites with the food plants. After mating, adults lay eggs, which hatch in about 10 days. The larvae feed on the food plants for about two weeks, at which time the food plants senesce and dry up. Larvae then locate cracks in the soil or other concealed areas where they diapause and remain dormant during the dry season until the next winter. After the food plants germinate following fall or winter rains, the larvae pupate into adults. The larvae may remain dormant for one or more seasons, which is dependent how quickly rain facilitates the sprouting of food plant seeds. In approximately a two-week period, the adults emerge, feed, disperse, reproduce, and then die.

Santa Ana sucker (*Catostomus santaanae*) FPT, CSC. The Santa Ana sucker inhabits small to medium-sized streams, usually less than 7.6m (25ft.) in width, with depths ranging form a few centimeters to over a meter. Found only in the Los Angeles Basin. the original range included only the Los Angeles, Santa Ana and San Gabriel rive systems. Now confined to the Santa Ana River, Tujunga Wash in the Los Angeles River system (possibly extirpated), and in the upper San Gabriel River system.

arroyo southwestern toad (*Bufo microscaphus californica*) FE, CSC. This amphibian historically occurred from San Luis Obispo County south into Baja California. There are records of the arroyo toad throughout coastal and desert regions of San Diego County. Arroyo toads are known to occur in the San Gabriel Mountains (Jennings and Hayes 1994). Arroyo toads have very specific habitat requirements. Arroyo toads occur in and breed in pools with a depth of 12 inches or less, with extensive gravel beds (Sweet 1991).

California red-legged frog (*Rana aurora draytonii*) FT, CSC. According to Jennings and Hayes (1994), this species is extirpated from the San Gabriel Mountains. California red-legged frogs require areas of deep, slow-moving water and dense vegetation such as ponds or deep pools in streams (Jennings and Hayes 1994).

southwestern willow flycatcher (*Empidonax traillii extimus*) FE and all subspecies of willow flycatchers in California are state endangered. The southwestern willow flycatcher breeds in dense riparian thickets and trees. This subspecies is known to breed in only eight locations in Southern California, including the Santa Margarita and San Luis Rey rivers in San Diego County and the Santa Inez River in Santa Barbara County (San Diego Natural History Museum 1995). Willow flycatchers are fairly common migrants and most of the migrants are believed to be of the common subspecies, *E.t. brewsteri*, which breeds throughout southern Canada and the northern United States.

Although the project area is within the breeding range of the endangered southwestern willow flycatcher, the flycatcher is not expected to breed on site. In southern California, this species is extremely rare and is restricted to large drainages with high quality riparian habitats, such as the Santa Inez and San Luis Rey Rivers.

coastal California gnatcatcher (*Polioptila californica californica*) FT, CSC. The California gnatcatcher is a species with restricted habitat requirements, being an obligate resident of coastal sage scrub habitats that are dominated by coastal sagebrush and generally occur below 750 feet elevation in coastal regions and below 1,500 feet inland (Atwood and Boisinger, 1992). It ranges from the Ventura County south to San Diego County and northern Baja California. It is less common in coastal sage scrub with a high percentage of tall shrubs such as laurel sumac, preferring habitat more low-growing vegetation. Coastal California gnatcatchers breed between mid-February and the end of August, with the peak of activity from mid-March to mid-May. Population estimates indicate that there are approximately 1,600 to 2,290 pairs of gnatcatchers remaining (MBA 1991; Atwood 1992). Declines are attributed to loss of coastal sage scrub habitat through development, and there is some evidence of cowbird nest parasitism.

least Bell's vireo (*Vireo bellii pusillus*) FE, SE. This migratory songbird requires riparian woodlands with a dense understory. Least Bell's vireo was once common in California, ranging from southern California north throughout the Central Valley to Tehama County. This species has declined as a result of habitat loss and nest parasitism by brown-headed cowbirds (*Molothrus ater*) (Franzreb 1989). The second largest population in the U.S. occurs at the Prado Dam flood control basin and along Chino Creek (CNDDB 1997).

Stephen's kangaroo rat (*Dipodomys stephensi*) FE, ST. The Stephen's kangaroo rat is a small burrowing rodent adapted for arid environments with long, strong hind legs, and short, relatively small front legs. Like other kangaroo rats it hops much like a true kangaroo. They live in underground burrows either which they excavate. The kangaroo rat will occupy burrows of other animals such as pocket gophers and Beechey ground squirrels. They primarily consume seeds, which they gather in cheek pouches and store underground. The Stephen's kangaroo rat occupies open areas of sparse perennial cover, with soils at least 18 inches deep.

Species of Special Concern

arroyo chub (*Gila orcutti*) CSC. The arroyo chub inhabits warm streams with highly variable seasonal stream flows where it seeks slow water areas with medium to high gradient streams. It is adapted to survive both hypoxic and large temperature fluctuations. Originally native to the Los Angeles, San Gabriel, and Santa Ana River systems, Malibu and San Juan creeks, and the Santa Margarita River drainage. Introduced into several river systems to the north of its native range.

western spadefoot toad (*Scaphiopus hammondii*) CSC. The western spadefoot occurs primarily in grassland situations, but occasionally populations also occur in valley and foothill woodlands. These toads prefer areas of sandy or gravelly soil in alluvial fans, washes, and floodplains. Some populations persist for a few years in orchard and vineyard habitats. The optimal habitat for the western spadefoot is grasslands with shallow temporary pools. Most of the year is spent in underground burrows. Recently-metamorphosed juveniles seek refuge in the immediate vicinity of breeding ponds for up to several days after transformation. They hide in drying mud cracks, under boards and other surface objects, including decomposing cow dung.

southwestern pond turtle (*Clemmys marmorata pallida*) CSC. The southwestern pond turtle inhabits marshes, sloughs, moderately deep ponds, and slow-moving portions of creeks and rivers. They require basking sites, such as partially submerged logs, vegetation mats, rocks, and mud banks. Females leave the water in late May to July to find nest sites. They are believed to use sandy banks near water, or sunny fields or banks up to several hundred meters from water.

San Diego horned lizard (*Phrynosoma coronatum blainvillei*) CSC. It is a small, spiny, somewhat rounded lizard that occurs primarily in open or sparse coastal sage scrub and chaparral communities. This species prefers loose friable soil for burrowing. Three factors have contributed to its decline: loss of habitat, over collecting, and the introduction of exotic ants. In some places, especially adjacent to urban areas, the introduced ants have displaced the native species upon which the lizard feeds (Hix 1990).

Beldings orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*) CSC. The orange-throated whiptail inhabits gently sloping hillsides, ridges, and valleys supporting open coastal sage scrub, chamise-redshank chaparral, mixed chaparral, and sparse grassland communities. The lizard is most common in open scrub habitats where its primary food species (subterranean termites of the genus Reticulitermes) are found.

silvery legless lizard (*Anniella pulchra pulchra*) CSC. It is a small, secretive, snake-like lizard that lives and forages in leaf litter, under debris, or within sandy soil (Stebbins 1985). It occurs in a variety of habitats, including sandy washes, coastal scrub habitats, and woodlands. The silvery legless lizard preys on insect larvae, small adult insects, and spiders (CDFG 1991).

coast patch-nosed snake (*Salvadora hexalepis virgultea*) CSC. The coast patch-nosed snake inhabits a variety of habitats, including chaparral and sage scrub. This snake is distributed throughout coastal southern California from Santa Barbara County south into Baja California.

two-striped garter snake (*Thamnophis hammondii*) CSC. The two-striped garter snake commonly inhabits perennial and intermittent streams having rocky beds bordered by willow thickets or other dense vegetation (Jennings and Hayes, 1994). This particular snake was common in southern California but has declined substantially in recent years. This species is intimately tied to aquatic habitats, preferring riparian and freshwater marsh habitats with perennial water. The snake feeds on small fishes, frogs, and tadpoles.

northern red-diamond rattlesnake (*Crotalus ruber ruber*) CSC. This subspecies is most commonly encountered in open scrub habitats such as coastal sage scrub, but it also inhabits grasslands, dry washes, chaparral, and woodlands. The northern red diamond rattlesnake ranges from southern San Bernardino County, south into Baja California, and from sea level to around 5,000 feet (Stebbins 1985).

double-crested cormorant (*Phalacrocorax auritus*) (rookery site) CSC. A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. August to May, fairly common to locally very common along the coast and in estuaries and salt ponds; uncommon in marine sub tidal habitats from San Luis Obispo Co. south, and very rare to the north. In the same season, fairly common at the Salton Sea and Colorado River reservoirs, and rare to fairly common in lacustrine and riverine habitats of the Central Valley and coastal slope lowlands. Less common in summer, except locally common near nesting colonies. Feeds mainly on fish (Robertson 1974, Cogswell 1977); also on crustaceans and amphibians. Dives from water surface and pursues prey underwater, usually remaining submerged for about 30 sec. Prefers water less than 9 m (30 ft) deep

with rocky or gravel bottom, but may catch fish as deep as 22 m (72 ft). Sometimes feeds cooperatively in flocks of up to 600, often with pelicans. Rests in daytime and roosts overnight beside water on offshore rocks, islands, steep cliffs, dead branches of trees, wharfs, jetties, or even transmission lines. Perching sites must be barren of vegetation (Bartholomew 1943). Must visit perches periodically in day to dry plumage. Sometimes rests, or even sleeps, on water in daytime (Palmer 1962). Requires considerable length of water, or elevated perch, for labored take-off. Requires undisturbed nest-sites beside water, on islands or mainland. Uses wide rock ledges on cliffs; rugged slopes; and live or dead trees, especially tall ones. Suitable nest-site must be within 8-16 km (5-10 mi) of dependable food supply (Palmer 1962). Yearlong, diurnal activity, except migrates both day and night. Summer residents of mountains and northeastern plateau are absent from about November to March; presumably migrate west and south to lowlands, especially along the coast, where the population increases in winter. Usually forages within 8-16 km (5-10 mi) of roost or nest colony (Palmer 1962).

western least bittern (*Ixobrychus exil is hesperis*) (nesting) CSC. In southern California, common summer resident (especially April to September), at Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). Probably nests only in emergent wetlands. Uncommon through winter in some locations; quite rare in deserts and coastal lowlands, but may breed locally (Garrett and Dunn 1981). Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in Central Valley, where it nests; and on northeast plateau, where it probably nests (Cogswell 1977, McCaskie et al. 1979). Distributional data are scant because of extremely secretive behavior. More studies are needed. Eats mainly small fishes, aquatic and terrestrial insects, and crayfish; also amphibians, small mammals, and miscellaneous invertebrates. Stalks or stands motionless in shallow water, then quickly strikes at prey, in water or on emergent vegetation; hunts in small openings in dense, emergent vegetation; moves on to new pool after each capture Palmer 1962); at Salton Sea and Colorado River, also may feed in adjacent thickets if saltcedar. Often feeds on the open-water side of emergent vegetation, using vegetation stalks as stepping-stones (Weller 1961). Found throughout most of California population migrates south to Mexico for winter (mainly October to March). Part of population in southern California apparently is nonmigratory.

white-faced ibis (*Plegadis chihi*) (rookery site) CSC. In southern California, common summer resident (especially April to September), at Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). Probably nests only in emergent wetlands. Uncommon through winter in some locations; quite rare in deserts and coastal lowlands, but may breed locally (Garrett and Dunn 1981). Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in Central Valley, where it nests; and on northeast plateau, where it probably nests (Cogswell 1977, McCaskie et al. 1979). Eats mainly small fishes, aquatic and terrestrial insects, and crayfish; also amphibians, small mammals, and miscellaneous invertebrates. Stalks or stands motionless in shallow water, then quickly strikes at prey, in water or on emergent vegetation; hunts in small openings in dense, emergent vegetation; moves on to new pool after each capture (Palmer 1962); at Salton Sea and Colorado River, also may feed in adjacent thickets of saltcedar. Often feeds on the open-water side of emergent vegetation, using vegetation stalks as stepping-stones.

Cooper's hawk (*Accipiter cooperi*) (nesting) CSC. Both resident and migratory populations exist in Southern California. Wintering Cooper's hawks are often seen in wooded urban areas and native woodland habitats. Preferred nesting habitats are oak and riparian woodlands dominated by sycamores and willows. Cooper's hawks in the region prey on small birds and rodents that live in woodland and occasionally scrub and chaparral habitats.

sharp-shinned hawk (*Accipiter striatus*) CSC. The sharp-shinned hawk is a fairly common migrant and winter resident throughout California. Breeding takes place in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. The sharp-shinned hawk prefers, but is not restricted to, riparian habitats and north-facing slopes, with abundant perch sites.

golden eagle (*Aquila chrysaetos*) (nesting and wintering) CSC. Golden eagles are large, long winged birds of prey. They use many habitats, but prefer open grass and brush habitats (Verner and Boss 1980). They prey upon rabbits, ground squirrels, other rodents, snakes and birds. Golden eagles usually nest on cliff faces with good views of the surrounding land. The peak of the nesting season is between late April and August (Verner and Boss 1980). This bird is an uncommon to rare permanent resident in open habitats throughout California.

The golden eagle is a California Fully Protected Species, a California Species of Special Concern, and is also protected by a 1963 amendment to the Bald Eagle Act of 1943. This species breeds in the mountains and foraging habitat is present onsite.

ferruginous hawk (*Buteo regalis*) (wintering) CSC. The ferruginous hawk hunts in shrub-steppe habitats, although it nests in nearby rocky outcrops and cliff sites in coulees. They avoid areas of extensive cultivation. The ferruginous hawk is a rarer nester in the area than the Swainson's hawk, with known nesting occurring in Grant, Adams, Lincoln, and Franklin Counties (USFWS 1988). Franklin County is the species' stronghold and is the most important ferruginous hawk nesting area in southeast Washington (Foster et. al. 1982). Ferruginous hawks have been observed nesting in Black Rock Coulee (Sullivan 1986). WDW lists ferruginous hawk breeding sites as priority areas (WDW 1993).

Loss of habitat due to conversion of grasslands and shrub-steppe to cropland, disturbance from human activities, and declines in prey populations have reduced ferruginous hawk numbers (ODFW 1992).

Swainson's hawk (*Buteo swainsoni*) ST. The Swainson's hawk hunts in shrub-steppe habitats (Sullivan 1986) and nests in nearby trees. Swainson's hawks nest from late March to mid-August (Verner and Boss 1980). Swainson's hawks will forage in agricultural lands, but prey are inaccessible during part of the nesting season. Nests with large areas of native shrub-steppe habitat nearby produce more young than nests with little such habitat nearby (Bechard 1980, 1983). There is a negative correlation between percent cultivated land and nesting success. More than 40 nesting sites have been reported in the region since the mid-1970s (Sullivan 1986, WNHP 1985). This figure represents a minimum known number, since no systematic, thorough searches of the basin for nesting hawks have been conducted. WDW lists Swainson's hawk breeding sites as priority areas (WDW 1993).

Swainson's hawk habitat can be found in juniper-sage, riparian, and oak savanna communities. Nests are usually constructed in a solitary tree, bush, or small grove, and on utility poles from 1.2 to 30 m (4 to 100 feet) above the ground. Breeding occurs from early March to mid-August with peak activity in late May to late July.

Swainson's hawk populations have declined markedly since the 1920's with steep declines in the 1950's. In some areas there have been losses of 90 to 95 percent of past populations (ODFW 1992).

northern harrier (Circus cyaneus) CSC. The northern harrier is a common winter visitor in southern California but probably does not breed in the area or on the site. Favored nesting and foraging areas include grassland, cultivated, ruderal, salt, and freshwater, although populations increase during fall migration. The bird prefers open woodlands, especially riparian woodlands in canyons or along

floodplains for breeding, but forage in almost any woodland or shrubland/brush land community and marsh habitats.

white-tailed kite (*Elanus leucurus*) (nesting) SFP. The white-tailed kite is a state Fully Protected species, a designation established prior to the adoption of the state and federal Endangered Species acts that protect the species from harassment or harm. The kite ranges over open grasslands, where it hovers until it locates small mammals or large insects. It nests in a variety of woodland habitats. Its status as fully protected in California was designated after populations had dropped to very low levels in the early part of this century. The population numbers of this species have increased in the last 20 years, but leveled off in recent years (Garrett and Dunn 1981) and have begun to decline again in some areas in the past 10 years. There have been several population fluctuations since the 1970s, and numbers remain below historic levels.

osprey (*Pandion haliaetus*) (nesting) CSC. The osprey is a large bird of prey which eats large fish (Roderick and Milner 1991). Osprey catch fish near the waters surface by aerial dives from flight (Verner and Boss 1980). WDW lists osprey breeding sites as priority areas (WDW 1993). The osprey is listed by the state as a monitor species.

There are osprey, (*Pandion haliaetus)*, nests approximately five miles southeast of the point where the proposed eastern loop transmission lines cross the Snoqualmie River. Osprey are expected to forage along the Snoqualmie River, including the area where the proposed eastern transmission loop crosses the river.

merlin (*Falco columbarius*) (CSC). In southern California, common summer resident (especially April to September), at Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). Probably nests only in emergent wetlands. Uncommon through winter in some locations; quite rare in deserts and coastal lowlands, but may breed locally (Garrett and Dunn 1981). Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in Central Valley, where it nests; and on northeast plateau, where it probably nests (Cogswell 1977, McCaskie et al. 1979). Distributional data are scant because of extremely secretive behavior. More studies are needed. Eats mainly small fishes, aquatic and terrestrial insects, and crayfish; also amphibians, small mammals, and miscellaneous invertebrates. Stalks or stands motionless in shallow water, then quickly strikes at prey, in water or on emergent vegetation; hunts in small openings in dense, emergent vegetation; moves on to new pool after each capture (Palmer 1962); at Salton Sea and Colorado River, also may feed in adjacent thickets of saltcedar. Often feeds on the open-water side of emergent vegetation, using vegetation stalks as stepping-stones (Weller 1961).

prairie falcon (*Falco mexicanus*) (nesting) CSC. Prairie falcons are fast flying birds of prey which generally eat small mammals and small to medium size birds. They capture mammals on the ground and birds in flight. They are birds of open country habitats which allow for fast pursuit of prey. They nest on high cliff faces that are 20 to 400 feet in height (Verner and Boss 1980). The peak of prairie falcon nesting is from early May to late August (Verner and Boss 1980). WDW lists breeding locations as priority areas (WDW 1993). Prairie falcons have been reported nesting at 8 locations within two miles of the Oak Flats site (WDW 1992b). Prairie falcons are expected to use the open habitats in the project area for feeding, and may perch in trees on site. WDW lists prairie falcon breeding locations as priority areas (WDW 1993).

Prairie falcons are a California Species of Special Concern. Because of winter foraging and nesting habitat loss, few areas remain in Southern California where prairie falcons can be consistently

observed, and no nest sites have been documented in the region in over 50 years. Preferred winter foraging habitat in Southern California includes grasslands, coastal sage scrub, and estuaries.

long-billed curlew (*Numenius americanus*) (nestng) CSC. The long-billed curlew uses shrub-steppe plant communities in the project area for foraging and nesting. These birds consume insects and other invertebrates. Curlew densities are two to four times greater in rangeland habitats than in farmed lands in the Columbia Basin (COE 1980). Two important breeding areas have been identified in the project area: (1) shrub-steppe habitats between Ephrata and Moses Lake and (2) shrub-steppe habitats on the Wahluke slope of the Saddle Mountains (Foster et. al. 1982). WDW lists breeding areas and area of spring or summer concentrations as priority habitats (WDW 1992).

Long-billed curlews nest in short grass prairie and overgrazed pastures. They are typically found in areas of low topographic slope, low vegetation height, and low vertical vegetative cover. Nests are usually located in areas of grass about 10 to 21 cm high. The nest is a sparsely-lined depression usually placed close to a conspicuous object such as a grass clump, rock, or dirt mound. Curlews usually arrive at the breeding grounds in late March. The birds typically arrive unpaired and the males quickly disperse over suitable nesting habitat where the males perform noisy undulating flight courtship displays to attract females (Jenni et al. 1982). The courtship displays are generally conducted for a period of 2 to 3 weeks and end when the male has attracted a mate. The nesting period extends from April to mid-August.

western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) SE. The western yellow-billed cuckoo requires dense riparian woods or thickets with dense understory (Garrett and Dunn 1981). The cuckoo is known from fewer than five locations in California. The cuckoo has been recorded in the Prado Dam basin and along the Santa Ana River (CNDDB 1997).

long-eared owl (*Asio otus*) (nesting) CSC. In southern California, common summer resident (especially April to September), at Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). Probably nests only in emergent wetlands. Uncommon through winter in some locations; quite rare in deserts and coastal lowlands, but may breed locally (Garrett and Dunn 1981). Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in Central Valley, where it nests; and on northeast plateau, where it probably nests (Cogswell 1977, McCaskie et al. 1979). Distributional data are scant because of extremely secretive behavior. More studies are needed. Eats mainly small fishes, aquatic and terrestrial insects, and crayfish; also amphibians, small mammals, and miscellaneous invertebrates. Stalks or stands motionless in shallow water, then quickly strikes at prey, in water or on emergent vegetation; hunts in small openings in dense, emergent vegetation; moves on to new pool after each capture (Palmer 1962); at Salton Sea and Colorado River, also may feed in adjacent thickets of saltcedar. Often feeds on the open-water side of emergent vegetation, using vegetation stalks as stepping-stones (Weller 1961). Rests, roosts, and hides in dense, emergent vegetation and, at Salton Sea and Colorado River, in adjacent thickets of saltcedar in desert riparian habitat. Yearlong, diurnal or circadian activity. Feeds in daytime, but not known if it feeds at night as does American bittern. Migrates nocturnally (Terres 1980).

burrowing owl (*Athene cunicularia hypugea*) (burrow sites) CSC. Formerly common throughout California, its decline was noticeable as early as the 1940s. The burrowing owl lives in the abandoned burrows of ground squirrels and other burrowing animals, modifying the burrows to suit their needs by digging. It is one of the few owl species often seen during the day, perched on fence posts or at the entrance to burrows.

California horned lark (*Eremophila alpestris actia*) CSC. The California horned lark is found along the coast of Northern California, in the San Joaquin Valley, in the Coast Ranges south of San Francisco Bay, and in Southern California west of the deserts. In Southern California, this subspecies is a fairly common breeding resident in grasslands and other dry, open habitats.

coastal cactus wren (*Campylorhynchus brunneicapaillus sandiegensis*) CSC. The coastal cactus wren inhabits arid parts of westward draining slopes and frequents succulent shrub, Joshua tree, desert wash, and coastal sage habitats. Pairs usually nest in cholla or other large, branching cactus, in yucca, or in stiff-twigged, thorny shrubs or small trees.

loggerhead shrike (*Lanius ludovicianus*) CSC. The loggerhead shrike is a robin-sized bird that inhabits open grassland. Shrike prey upon small rodents and large insects which they capture on the ground from flights from low perches. Their habit of hunting from perches usually makes them conspicuous in their open habitat. Shrikes build stick nests in low trees or shrubs, where they raise two to four young.

tricolored blackbird (*Agelaius tricolor*) (nesting colony) CSC. In southern California, common summer resident (especially April to September), at Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). Probably nests only in emergent wetlands. Uncommon through winter in some locations; quite rare in deserts and coastal lowlands, but may breed locally (Garrett and Dunn 1981). Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in Central Valley, where it nests; and on northeast plateau, where it probably nests (Cogswell 1977, McCaskie et al. 1979). distributional data are scant because of extremely secretive behavior. More studies are needed. Eats mainly small fishes, aquatic and terrestrial insects, and crayfish; also amphibians, small mammals, and miscellaneous invertebrates. Stalks or stands motionless in shallow water, then quickly strikes at prey, in water or on emergent vegetation; hunts in small openings in dense, emergent vegetation; moves on to new pool after each capture Palmer 1962); at Salton Sea and Colorado River, also may feed in adjacent thickets of saltcedar. Often feeds on the open-water side of emergent vegetation, using vegetation stalks as stepping-stones (Weller 1961).

southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CSC. The southern California rufous-crowned sparrow is a common resident of sparse, mixed chaparral and sage scrub habitats (especially coastal sage scrub), and often utilizes relatively steep, rocky hillsides with stands of grasses, herbs, and forbs.

yellow warbler (*Dendroica petechia brewsteri*) CSC. The yellow warbler breeds in riparian areas in Southern California but mainly occurs as migrants (Unitt 1984). This species is a CDFG California Species of Special Concern. Yellow warblers breed from southern British Columbia and western Washington south to northwestern Baja California and northwestern Texas (Curson 1994). In Southern California, yellow warblers breed locally in riparian woodlands. Yellow warblers were observed in wooded habitats during migration within the site during previous surveys, but were not observed during breeding bird surveys.

yellow-breasted chat (*Icteria virens*) CSC. The yellow breasted chat is an uncommon summer resident in riparian habitat in southern California. These birds typically breed in dense, established, or mature riparian vegetation.

bald eagle (*Haliaeetus leucocephalus*) FE, SE. Bald eagles are large birds of prey, that eat fish, waterfowl, and carrion (Verner and Boss 1980). Bald eagles occur within the project area during the

winter (November through March) (BPA 1990). The main food of wintering bald eagles in the Yakima basin is carrion from elk, deer, and other animals (BPA 1990). There are no known nests in the region surrounding the Cle Elum site. Individual bald eagles have been regularly observed during field work. Ten to fifteen wintering bald eagles have been reported to use the river and riparian area around the site (WDW 1992b). WDW lists bald eagle breeding territories, communal roosts, regular winter concentration areas, and regularly used perch trees as priority areas (WDW 1993).

Bald eagles are found along the Columbia River during winter. There are no known nesting areas in the vicinity of the five sites. Nesting is not expected as bald eagles prefer to nest in large trees near bodies of water where fish and waterfowl are abundant. These habitat conditions re not found on any of the five sites. Thus no conflicts between conservation of bald eagles, and development of any of the sites is expected.

The bald eagle is a fish- and waterfowl-eating predator that occupies habitats adjacent to large lakes, streams, or rivers (Verner and Boss 1980), nesting in large trees. In the Columbia Basin, they occur in many habitats near large bodies of water. There is currently an active eagle nest at Banks Lake (USFWS 1989). Important winter concentrations occur along the Columbia River, on Banks Lake, Osborn Bay Lake, and in the Moses Lake-Potholes Reservoir area (USFWS 1988, 1989, Foster et. al. 1982).

Bald eagles typically require large bodies of water or free flowing rivers containing fish, with adjacent snags or other perches. They generally nest in large, old-growth or dominant live trees with open branching, especially ponderosa pines. Eagles nest most frequently in stands with less than 40 percent canopy coverage. Birds often choose the largest tree in a stand to build their nest. Nests are located 18 to 61 m (60 to 200 feet) above the ground, usually below the crown of the tree. Nests are usually located near a permanent water source. Bald eagles nest from February to August, with peak breeding from March to June.

Bald eagle populations have been reduced due to habitat loss, loss of food supply, human disturbance, and pesticide use.

peregrine falcon (*Falco peregrinus*) SE. The peregrine falcon is a fast-flying predator that captures its prey in flight. Its primary prey are medium- to large-sized birds, especially waterfowl and shorebirds (Verner and Boss 1980). Peregrines nest on high cliffs, skyscrapers, and bridges. Nesting occurs from March through September. WDW lists peregrine breeding locations, and areas of shrub-steppe where individuals are seen year round, as priority areas (WDW 1992). Peregrines have been noted in the Columbia Basin and are considered an occasional migrant during spring and fall (USFWS 1989, Foster et. al. 1982). There are no known peregrine nest sites in the project area, nor are they residents in the area.

Peregrine falcon populations declined during the 1950's and after due to widespread pesticide use which caused reproductive failure. This resulted in local extinctions. Populations in many areas are now stable and slowly increasing. A major recovery effort has been in operation since the early 1970's.

pallid bat (*Antrozous pallidus*) CSC. The pallid bat generally inhabits open, lowland areas below 2,000 feet. This medium-sized bat commonly roosts in rock crevices and caves and beneath rock slabs. Pallid bats emerge late in the evening, and hunt large prey, including ground-dwelling insects.

pale big-eared bat (*Corynorhinus townsendii pallescens*) CSC. The pale big-eared bat is found in a wide variety of habitats from grasslands to conifer woodlands. Roosting sites include limestone caves, mine tunnels, buildings, and other man-made structures. This species is found throughout California west of the deserts.

western mastiff bat (*Eumops perotis*) CSC. The western mastiff bat inhabits lower elevations, where it roosts in rocky areas, often near a stream. Natural roosts include large, exfoliating slabs of granite or sandstone on cliff faces, and cracks in boulders sufficiently high above the ground to allow an unobstructed vertical drop of 10 feet for taking flight. This species is most common in southwestern California, and is associated with grassland, open shrub, chaparral, oak woodland, and riparian vegetation.

San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) CSC. The San Diego black-tailed jackrabbit's range includes grasslands, coastal sage scrub, and chaparral in coastal regions of California from Ventura County to northern Baja California. The black-tailed jackrabbit is most active at dawn and dusk and feeds on green vegetation.

northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) CSC. The northwestern San Diego pocket mouse inhabits arid coastal and desert areas of southern California from Orange, San Bernardino, and Riverside Counties south into Baja California. Plant communities preferred by this species include annual grassland, sage scrub, chaparral, and desert scrub. The mouse confines its activities to the night, when it forages for seeds; during the day it retreats to underground burrows. The species is declining in abundance, primarily due to loss of habitat throughout its range.

San Diego desert woodrat (*Neotoma lepida intermedia*) CSC. The San Diego desert woodrat is found in a variety of habitats from sea level to 8,500 feet in elevation. This species occurs along the coast form northwest Baja California to San Luis Obispo County. The desert woodrat prefers upland habitats where sparse shrub lands predominate, especially where prickly pear cactus occurs.

REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT COORIDOR ASSESSEMENT

Overview

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967, Soule 1987, Harris and Gallager 1989, Bennett 1990). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed "demes") linked together via a system of corridors is termed a "metapopulation". The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population's genetic variability is generally associated with an increase in a population's health.

Corridors mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983, Fahrig and Merriam 1985, Simberloff and Cox 1987, Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "wildlife corridor", "travel route", "habitat linkage", and "wildlife crossing" to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel route: A landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relative direct link between target habitat areas.

Wildlife corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species.

Wildlife crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often "choke points" along a movement corridor.

Wildlife Movement within the Study Area

The focus of this study is to determine if the alteration of current land use on the subject property will have significant impacts on the regional movement of wildlife. With the increasing development in the immediate vicinity, this becomes even more important to examine. This study did not include the use of track plates, camera stations, scent stations, or snares. MBA decided that these methods would produce undo stress on wildlife. Instead, notation was made during all site visits of road kill, general locations of animal sign, and inspection of resource maps for the vicinity. These conclusions are based on the knowledge of desired topography and resource requirements for wildlife potentially utilizing the Chino Sub Area 2 and vicinity.

Currently on the Chino Sub Area 2 site, wildlife have nearly uninhibited movement across the site within the Prado Regional Park. Outside of the park and within the dairy lands, wildlife movement

would be limited to opportunistic species. Opportunistic wildlife species such as coyote (*Canis latrans*), raccoon (*Procyon lotor*), skunk (*Mephitis mephitis*), opossum (*Didelphis virginiana*), and bobcat (*Lynx rufus*) may try to take advantage of the few resources within the dairy area. Wildlife utilizations within the dairy areas is expected to be fairly low based on the high number of domestic dogs, which tend to be of more aggressive breeds and training. Additionally, the intolerance of dairy owners towards risk of cattle loss to wildlife would increase threats on wildlife utilization of such areas.

Desire by wildlife to travel into the northern portions of the Chino Sub Area 2 site unlikely. However, the southern portion of the site may host a network of wildlife movement, connecting the Chino Hills with the Santa Ana River Watershed. Additionally, the southern portion of the site provides year around water supplies and foraging areas. Many wildlife species travel to Prado Basin and the surrounding area to breed and forage.

JURISDICTIONAL AREAS

Although formal jurisdictional determinations of the Chino Sub Areas 2 site was not conducted, general notations were made of areas potentially regulated by the USACE and CDFG. Seven waterbodies were recognized as most likely falling under the jurisdiction of the USACE and CDFG, in addition to hosting a variety of water fowl (Kara Palm Page 4306/27/01Exhibit 5). Chino Creek and Mill Creek are two major regional waterways. These two creeks are a part of the larger Santa Ana Watershed and may have many small tributaries of their own. The three small ponds utilized by the Prado Recreation Dog Training Facility are likely jurisdictional and do host waterfowl species. Prado Lake also is within the jurisdiction of the regulating agencies and is heavily utilized by waterfowl and foraging raptors. Continuing northeast of Prado Lake is a small feeder drainage. This drainage is extremely disturbed upstream, especially within the dairy lands. The drainage has been forced into dirt ditches, re-routed, and soiled by cattle. This drainage is also the spillway outlet for Prado Lake and converges with Chino Creek.

Detention basins are currently utilized throughout the dairy lands. These detention basins appear to be of low value to water fowl due to the high concentration of cattle waste. The detention basins are likely excluded under USACE and CDFG but warrant close examination as development activities encroach on these areas.

3.0 OPPORTUNITIES AND CONSTRAINTS

Potential Limitations/Constraints

- Compatible uses should be identified and planned for areas adjacent to Mill Creek, Chino Creek, and the upland limits of Prado Flood Control Basin. These areas likely host special status species and should be avoid when possible in the development stage. Further biological studies would be necessary to determine the presence/absence of special status species potentially residing in these areas.

- Impacts within riparian corridors within the project boundaries would likely be subjected to public scrutiny. These areas are extremely controversial due to the high potential for special status species to occur within these areas.
- Development impacting areas considered jurisdictional by the United States Army Corps of Engineers or California Department of Fish and Game will likely require stringent mitigation programs to off-set impacts to sensitive aquatic resources. A formal wetland delineation is suggested to ensure the accurate mapping of any resources potentially regulated by these public agencies.
- Increase flow due to urban run-off would be monitored by the USACE, CDFG and the Regional Water Quality Control Board. Permits will likely be required by all three of these agencies prior to impacting resources falling under their perspective jurisdictions.
- Though a lower significance issue, special attention should be made to the removal of Eucalyptus windrows. These areas may host raptors and other species listed under the Migratory Bird Treaty Act.
- The northeastern corner of the property is designated as Delhi series soils. Because of this, USFWS will likely require surveys to determine presence/absence of these areas prior to development activities.
- Areas falling within the 100-year floodplain where thickets of riparian trees and shrubs occur or may become established as a result of natural floodplain processes or rehabilitation are considered "designated critical habitat" for the southwestern willow flycatcher (*Empidonax traillii extimus*).

Potential Opportunities

- A majority of the site is potentially developable land. The portions designated in Exhibit 4 are considered to have a low sensitivity. These areas did not exhibit the potential to host special status species. Additionally these areas are heavily disturbed.

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Memorandum

TO: Bob Prasse, City of Chino **DATE:** July 26, 2002

CC:

FROM: Steve Nelson,
PCR Services Corporation

RE: **THE PRESERVE RAPTOR FORAGING HABITAT ASSESSMENT**

At the request of the City of Chino, **PCR Services Corporation (PCR)** submits the following independent assessment of impacts to raptor foraging habitat associated with The Preserve project. As we understand the City's request, this analysis will be used by city planning staff as input to the Recirculated Draft EIR now being prepared by Michael Brandman Associates.

The focus of this assessment is on the project-related loss of raptor habitat and the expected effect this loss will have on raptorial birds, as a taxonomic group, in the region. In addition, this assessment addresses both the incremental and cumulative impacts of the proposed project.

For the purpose of this assessment, the "region" is defined as the area encompassed by the Prado Flood Control Basin, the bottomlands making up the Chino Valley, and the adjacent Chino Hills to the west. Specifically, the region is defined by State Route 60 in the north, State Route 91 in the south, Interstate 15 in the east and State Route 57 in the west. In our opinion, the area included in this definition of region represents a biologically meaningful unit, or system, as it relates to the life histories of raptorial birds in general. As a group, raptors generally require foraging territory and prey availability over a relatively large home ranges, particularly during breeding. Outside of the breeding season, they continue to require large areas to forage and equally important, to disperse from natal territories. Not surprisingly, the home ranges of many raptors are measured in terms of square miles, rather than in terms of acres. From a biological standpoint, it is reasonable to assume that raptorial birds using the Chino Valley bottomland where the project is located interact and are not distinct populationally from raptorial birds of the same species using the Chino Hills. Further, it is assumed that the individuals of some species use both the bottomlands and the adjacent hills as part of their home ranges. Conversely, the extensive urbanization to the north and east, the Santa Ana Mountains to the south, and the Puente Hills as a distinct biological unit to the west, represent physical barriers, which logically confine the region to the boundaries delineated above.

After defining the region, PCR classified land uses/vegetation cover in terms of their suitability for use as foraging habitat.

Non-suitable habitat was defined as including:

- Urban and suburban development;
- Heavily vegetated areas where dense chaparral typically hinders foraging;

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- Small areas of open habitat that otherwise would be deemed suitable, but are rendered unsuitable due to their isolation;
- Dairy stockyards devoid of all vegetation and where cow manure is stockpiled; and
- Golf courses and turf play fields.

Suitable habitat was defined as including:

- Large and contiguous undeveloped areas with open native and/or naturalized vegetation, such as open woodlands, sage scrub, river bottoms and grasslands;
- Agricultural lands used as cropland (e.g., alfalfa) or in a fallow condition; and
- Windrows and woodlands used by foraging raptors to roost, nest and/or forage (e.g., accipiters) nearby open foraging habitat.

Although somewhat generalized for all species of birds of prey, we believe these definitions of suitable and non-suitable foraging habitat present an accurate basis for understanding the effects of the project on raptors, particularly in the context of the project's effects on regional populations.

As defined above, suitable and non-suitable habitat areas were mapped on to mylar overlayed on recent color aerial photographs of the region at a scale of 1"=500'. These were then digitized using ArcView GIS software for the analysis. The results of PCR's mapping of the existing conditions are summarized in Table 1, *The Preserve Regional Raptor Foraging Habitat Assessment Existing Conditions.* As shown, the region encompasses a total of approximately 124,500 acres, of which approximately 56,055 acres is considered to be suitable for raptor foraging. Approximately 3,364.1 acres of this suitable foraging habitat occurs within The Preserve Sub-Area 2 study area.

Project-related impacts (losses) to suitable raptor foraging habitat are summarized in Table 2, *The Preserve Regional Raptor Foraging Habitat Assessment Impact Analysis.* On an incremental basis, the project is expected to result in the loss of 1,256.1 acres of suitable habitat; that is, the loss of all suitable habitat within The Preserve Sub-Area 2 study area above the 566-foot elevation line.[1] This represents a loss of approximately 2.2 percent of all suitable habitat existing in the region. In our opinion this incremental loss would not have a significant adverse effect on regional raptor populations. We recognize this conclusion may not apply to all species, such as the burrowing owl; however, this loss would not be expected to reduce and result in serious declines for species of buteos, accipiters, falcons, vultures, harriers, kites, other owls and eagles.

[1] Michael Brandman Associates. April 2002. *City of Chino's AG Preserve Resources Management Plan.*

Table 1

The Preserve Regional Raptor Foraging Habitat Assessment Existing Conditions

Habitat Classification	Acreage Within Sub-Area 2*	Acreage Within Region, Outside Sub-Area 2	Total
Non-Suitable	2,080.5	65,800	68,445
Suitable			
Agriculture	2,832.8	13,500	15,255
Native Vegetation, including Willows/Woodlands	531.3	39,790	40,800
Suitable Subtotal	3,364.1	53,290	56,055
Total	**5,435**	**119,090**	**124,500**

*(acreages listed below are for the whole Sub-Area 2)

Source: PCR Services Corporation and MBA 2002.

Table 2

The Preserve Regional Raptor Foraging Habitat Assessment Impact Analysis

Habitat Classification	Impacts Within Sub-Area 2Above 566 ft Line*	Cumulative Impacts Within Region, Outside Sub-Area 2	Total
Non-Suitable	N/A	N/A	0
Suitable			
Agriculture	1,256.1	7150	8366
Willows/Woodlands	0	880	880
Suitable Subtotal	1,256.1	8,030	9,286.1
Total	**1,256.1**	**8,030**	**9,286.1**

*(acreages listed below are within the 566 ft line defined by MBA only)

Source: PCR Services Corporation and MBA 2002.

On a cumulative basis, impacts to raptor habitat are expected from thirteen projects listed in The Preserve Chino Sphere of Influence Sub-Area 2 Draft Environmental Impact Report. PCR does not know of any major projects throughout the rest of the study area region. Using exhibit 4.2-1 Cumulative Projects from the report, PCR found the general location and mapped the approximate boundaries of each project on United States Geological Survey topographical quadrangle maps of Prado Dam and Corona North. Acreages for seven of the projects were listed in the EIR. If a project was defined by unit size, then each unit was assigned a ¼ acre lot to calculate total acreage.

Cumulatively, The Preserve project and others planned and/or approved in the region will result in the loss of approximately 9,286 acres of suitable raptor foraging habitat. This total represents approximately 16.5 percent of the existing habitat available to raptors in the region. In PCR's opinion, this cumulative loss is a significant adverse impact to regional populations of raptors according to the threshold criteria used in the EIR.