Appendix D.2007–2008 Biological Resources Assessment

Appendix

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Appendix D:
Biological Resources Assessments

D.1 - Biological Technical Report
Prepared by Glenn Lukos Associates - September 2007

D.2 - Jurisdictional Delineation
Prepared by Glenn Lukos Associates - July 2007

D.3 - Memorandums Addressing Basin Revegetation
Prepared by Glenn Lukos Assoicates - 2008

D.4 - List of Invasive and Non-Native Plant Species (Table 6-2)
Prepared by California Exotic Pest Plant Council US Department of Agriculture
October 1998

D.5 - Memorandum Addressing Basin Seed Mix
Prepared by Michael Brandman Associates - March 2008

D.1 - Biological Technical Report
Prepared by Glenn Lukos Associates - September 2007

BIOLOGICAL TECHNICAL REPORT FOR THE APPROXIMATELY 272–ACRE EDGEWATER COMMUNITIES PROPERTY CHINO, SAN BERNARDINO COUNTY, CALIFORNIA.

September 2007

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REPORT SUMMARY

The Edgewater Communities property (Project Site) comprises approximately 272 acres, and is located in Chino, San Bernardino County, California. The Project Site is located south of Chino-Corona Road and east of Cucamonga Avenue. A segment of Mill Creek is roughly coincident with the eastern boundary of the Project Site. The proposed Project consists of the development of a residential community over approximately 142 acres, with the remainder to consist of open space.

Field studies were conducted throughout the entire Project Site and focused on a number of primary objectives that would comply with CEQA requirements: (1) general reconnaissance surveys; (2) general floristic surveys and vegetation mapping; (3) general wildlife surveys; (4) habitat assessments for special-status plants, (5) habitat assessments and focused surveys for special-status animals, and (7) evaluation of the site for jurisdiction of the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Game (CDFG).

The Project Site contains nine distinct vegetation/land use types, with the majority of the site consisting of agricultural uses, disturbed areas, and areas supporting ruderal vegetation. One special-status plant species, California black walnut (*Juglans californica*) was detected on site on the bank of Mill Creek.

In addition to burrowing owl and least Bell's vireo, nine special-status animal species were observed at the Project Site during general and focused biological surveys. These include western burrowing owl (*Athene cunicularia hypugea*), least Bell's vireo (*Vireo bellii pusillus*), white tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*), white-faced ibis (*Plegadis chihi*), double-crested cormorant (*Phalacrocorax auritus*), yellow warbler (*Dendroica petechia*), and yellow breasted chat (*Icteria virens*).

The eastern boundary of the Project Site is roughly coincident with Mill Creek, which is subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), and California Department of Fish and Game (CDFG). Mill Creek will be fully avoided by the proposed project, along with upland, non-jurisdictional willow scrub adjacent to Mill Creek in the easternmost portion of the site.

With adequate measures, including Project Design Features (PDFs) described herein, adverse impacts to biological resources would be either avoided or mitigated.

1.0 INTRODUCTION

This biological technical report addresses biological resources associated with the approximately 272-acre Edgewater Communities Project, located in the City of Chino, San Bernardino County, California, and characterizes the baseline condition of the property with respect to biological resources prior to any development conditions. This report has been prepared to identify and analyze impacts to biological resources by a proposed residential housing development. Specifically, the report identifies and evaluates on site biological resources, state and federal permitting requirements, and requirements of the California Environmental Quality Act (CEQA).

The scope of this biological technical report includes a description of all methods employed, existing site conditions, surveys results, documentation of special-status botanical and wildlife resources identified, impact analyses and mitigation measures, and recommendations for ongoing and future surveys of the Project Site in order to identify potential impacts under CEQA. Methods of study include a review of relevant literature, general and focused field surveys, and a Geographical Information System (GIS)-based mapping and impact analyses of vegetation communities. As appropriate, this report is consistent with accepted scientific and technical standards and survey guideline requirements issued by U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), the California Native Plant Society (CNPS), and the Burrowing Owl Consortium.

1.1 Location of Project Site

The Project Site encompasses approximately 272 acres in the southwestern corner of San Bernardino County, California. The project is depicted on Township 3 South, Range 7 West, Section 4 and 5 of the USGS 7.5' Quadrangles for Corona North [dated 1967, photorevised 1981] and Prado Dam [dated 1967, photorevised 1981] [Exhibit 1 – Regional Map]. The Project Site is located south of Chino-Corona Road and east of Cucamonga Avenue. A segment of Mill Creek is roughly coincident with the eastern boundary of the Project Site [Exhibit 2 – Vicinity Map]. Current land uses associated with the project site include fallow agricultural fields, pastures for grazing, dairy operations and vacant land. Exhibit 3 is the vegetation map of the site, Exhibit 4 includes representative photographs, Exhibit 5 depicts locations for least Bell's vireo and burrowing owl locations, Exhibit 6 depicts the locations of wintering raptor observations, Exhibit 7 depicts areas evaluated for Corps and CDFG jurisdiction, Exhibit 8 depicts Critical Habitat for least Bell's vireo, and Exhibit 9 depicts the burrowing owl/raptor grassland mitigation area.

1.2 Project Description

The proposed project is the Edgewater Communities Project, proposed as a Specific Plan Amendment for the Preserve Specific Plan, approved by the City of Chino in March of 2003. The Edgewater Communities Project will include changes in land use from the approved Preserve Specific Plan. The Master Plan for Edgewater includes excavation of existing disturbed agricultural land in the lowest areas of the project site to create depressions that will function as lakes. The excavated material will be deposited around these lakes to increase the elevation to

566 feet above mean sea level or higher, and clear of the Prado Dam inundation line. The area below the 566-foot dam inundation elevation will be used for active and passive recreation, habitat, and agricultural uses.

Approximately 134.68 acres of the project site will consist of residential development. Of the 1074 residential units, approximately 50 percent (537 units) are classified as "low density" homes. The remaining half is equally divided and classified as "medium" and "high" density homes. Approximately 2.12 acres of the project site will consist of a Primary Recreational Facility, 2.53 acres will consist of a Church/School Site, and 2.77 acres will consist of the Chino-Corona Road and Cucamonga Avenue Right of Ways (ROW). The site will have a total of 142.10 acres of Developed Space, and the remaining 130.84 acres will consist of Open Space, including the five created lakes. As a project design feature, substantial areas of native habitat riparian and emergent marsh habitat will be incorporated into the design of the lake edges that will provide suitable habitat for a wide range of avifauna, including listed species such as least Bell's vireo.

2.0 METHODOLOGY

In order to identify and evaluate biological resources and potential impacts associated with development of the Project Site relative to the California Environmental Quality Act (CEQA), GLA assembled biological data consisting of the following main components:

- Performance of vegetation mapping for the Project Site;
- Performance of site-specific biological surveys to evaluate the presence of state and/or federally-listed species and other special-status species (or potentially suitable habitat) to the satisfaction of CEQA; and
- Delineation of aquatic resources, including ephemeral and intermittent drainages, and associated wetlands/riparian habitat subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Game (CDFG).

The focus of the biological surveys was determined through initial site reconnaissance, a review of the California Natural Diversity Database (CNDDB) [CDFG 2007], the 2007 California Native Plant Society (CNPS) Inventory (CNPS 2007), the USDA Soil Conservation Service's (SCS) soil maps for the Corona North and Prado Dam quadrangles, other pertinent literature, and knowledge of the region. Site-specific general and focused surveys within the project area were conducted on foot for all areas that support potentially suitable habitat for each target plant or animal species identified below. The Project Site was also surveyed on foot and the vegetation communities mapped directly onto a 200-scale color aerial photograph based on the Holland (1986) Classification System.

2.1 Summary of Surveys

Field studies were conducted for the entire 272-acre Project Site. The field studies focused on a number of primary objectives that would comply with CEQA requirements: (1) general

reconnaissance surveys and vegetation mapping according to the Holland Classification System; (2) general floristic surveys; (3) general wildlife surveys; (4) habitat assessments for special-status plants; and (5) habitat assessment and focused surveys for special-status animals. Observations of all plant and wildlife species were recorded during each of the above mentioned survey efforts [Appendix A – Floral and Faunal Compendium]. Table 2-1 provides a summary list of surveys dates, survey types and personnel.

Table 2-1. Summary of Biological Surveys for the Project Site.

Survey Date	Survey Type	Surveying Biologist
4/12/2005	General Biological Survey Least Bell's Vireo Survey Habitat Assessment for Western Burrowing Owl	J. Ahrens, D. Klepeis
4/22/05	General Biological Survey Least Bell's Vireo Survey	D. Klepeis, T. Bomkamp
5/2/2005	General Biological Survey & Least Bell's Vireo Survey	D. Klepeis, J. Ahrens,
5/13/2005	General Biological Survey Least Bell's Vireo Survey Habitat Assessment for Western Burrowing Owl	E. Bomkamp, D. Klepeis
5/23/2005	Least Bell's Vireo Survey & Burrowing Owl Survey	D. Klepeis
5/31/2005	Southwestern Willow Flycatcher Survey	R. Hamilton
6/6/2005	Burrowing Owl Survey	D. Klepeis
6/14/2005	Southwestern Willow Flycatcher Survey	R. Hamilton
6/14/2005	Burrowing Owl Survey	J. Ahrens, D. Klepeis
6/15/2005	Least Bell's Vireo Survey	E. Bomkamp, D. Klepeis
7/2/2005	Southwestern Willow Flycatcher Survey	R. Hamilton
7/3/2005	Least Bell's Vireo Survey Burrowing Owl Survey	D. Klepeis, E. Bomkamp
7/8/2005	Southwestern Willow Flycatcher Survey	R. Hamilton
7/17/2005	Southwestern Willow Flycatcher Survey	R. Hamilton
7/13/2005	Least Bell's Vireo Survey Vegetation Mapping	D. Klepeis, P. McIntyre
10/20/2005	Vegetation Mapping	D. Klepeis, E. Bomkamp
1/17/2006	Jurisdictional Delineation	D. Klepeis, E. Bomkamp
1/25/07	Winter Raptor and Burrowing Owl Survey	J. Ahrens
1/29/07	Winter Raptor and Burrowing Owl Survey	J. Ahrens, T. Bomkamp
2/2/07	Winter Raptor and Burrowing Owl Survey	J. Ahrens
2/24/07	Winter Raptor and Burrowing Owl Survey	J. Ahrens
3/14/07	Winter Raptor and Burrowing Owl Survey	J. Ahrens
3/24/07	Jurisdictional Delineation/Burrowing Owl Survey	T. Bomkamp
3/30/07	Winter Raptor and Burrowing Owl Survey	J. Ahrens
4/14/07	Burrowing Owl Survey	T. Bomkamp

2.2 Soil Resources

The Soil Conservation Service (SCS)[1] identifies four soil types as occurring within the boundaries of the Project Site. These include three soils of the Chualar Series and one soil in the Grangeville Series.

2.2.1 Chualar

The Chualar series consists of well-drained soils. These soils are formed on alluvial fans and terraces in mixed, moderately fine-textured alluvium. The vegetation commonly associated with Chualar soils includes annual grasses and forbs. Chualar soils are used for irrigated small grain, pasture plants, alfalfa, and silage. Some areas are used for dry-farmed small grain and pasture plants. Chualar soils mapped within the Project Site include:

- Chualar clay loam, 0 to 2 Percent Slopes (CkA)
- Chualar clay loam, 2 to 9 Percent Slopes (CkC)
- Chualar clay loam, 9 to 15 Percent Slopes (CkD)

2.2.2 Grangeville

The Grangeville series consists of somewhat poorly drained soils. These soils are formed on slopes of alluvial fans in moderately coarse textured granitic alluvium. The vegetation commonly associated with Grangeville soils includes annual grasses and forbs and scattered cottonwood trees. Grangeville soils are used for irrigated alfalfa, small grain and pasture plants. Grangeville soils mapped within the Project Site include:

- Grangeville fine sandy loam (Gr)

2.3 Botanical Resources

A site specific survey program was designed to accurately document the botanical resources for the Project Site, which consisted of six components: (1) a literature review; (2) preparation of a list of target special-status plant species and sensitive vegetation communities that could occur on site; (3) general field reconnaissance surveys; (4) vegetation mapping according to the Holland Classification System; (5) focused surveys for special-status plants; and (6) preparation of a vegetation map, including the location of any sensitive vegetation communities found on site.

2.3.1 Literature Search

Prior to conducting fieldwork, pertinent literature on the flora of the region was examined. A thorough archival review was conducted using available literature and other historical records. These resources included the following:

[1] SCS is now known as the National Resource Conservation Service of NRCS.

- California Native Plant Society *Inventory of Rare and Endangered Plants of California* (Seventh Edition, online) v7-07c. (CNPS 2007), and
- California Natural Diversity Data Base (CNDDB) for the two USGS 7.5' quadrangles containing (or close to) the Project Site: Corona North and Prado Dam (CNDDB 2007);

2.3.2 Special-Status Plants Evaluated for the Project Site

The CNDDB was initially consulted to determine well-known occurrences of plants and habitats of special concern in the region. Other sources used to develop a list of target species for the survey program included the CNPS Inventory (CNPS 2007). Based on this information, vegetation profiles and a list of target sensitive plants species and habitats that could occur within the Project Site were developed and incorporated into a mapping and survey program to achieve the following goals: (1) characterize the vegetation associations and land use; (2) prepare a detailed floristic compendium; (3) implement general reconnaissance field work and focused surveys to document the distribution and abundance of the rare, endangered, and sensitive plant species within the Project Site; and (4) prepare a vegetation map and biological resource map showing the distribution of the sensitive botanical resources associated with the Project Site.

Table 2-2 provides a list of all special-status plants evaluated for the Project Site through habitat assessments and focused surveys (where suitable habitat was present). Species were evaluated based on a number of factors, including: (1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the property; and (2) any other special-status plants that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

Table 2-2. Special-Status Plants Evaluated for the Project Site

Species Name	Status	Habitat Requirements
Chaparral bear grass *Nolina cismontana*	Federal: None State: None CNPS: List 1B.2	Chaparral, coastal sage scrub. Occurring on sandstone or gabbro substrates.
Chaparral sand verbena *Abronia villosa* var. *aurita*	Federal: None State: None CNPS: List 1B.1	Sandy soils in chaparral, coastal sage scrub.
Coulter's saltbush *Atriplex coulteri*	Federal: None State: None CNPS: List 1B.2	Coastal bluff scrub, coastal dunes, coastal sage scrub, valley and foothill grassland. Occurring on alkaline or clay soils.
Intermediate mariposa lily *Calochortus weedii* var. *intermedius*	Federal: None State: None CNPS: List 1B.2	Rocky soils in chaparral, coastal sage scrub, valley and foothill grassland.
Many-stemmed dudleya *Dudleya multicaulis*	Federal: None State: None CNPS: List 1B.2	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.

Species Name	Status	Habitat Requirements
Parry's spineflower *Chorizanthe parryi* var. *parryi*	Federal: None State: None CNPS: List 3.2	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.
Rayless ragwort *Senecio aphanactis*	Federal: None State: None CNPS: List 2.2	Chaparral, cismontane woodland, coastal sage scrub. Occurring on alkaline soils.
Salt spring checkerbloom *Sidalcea neomexicana*	Federal: None State: None CNPS: List 2.1	Mesic, alkaline soils in chaparral, coastal sage scrub, lower montane coniferous forest, Mojavean desert scrub, and playas.
Santa Ana River woolly star *Eriastrum densifolium* ssp. *sanctorum*	Federal: FE State: SE CNPS: List 1B.1	Alluvial fan sage scrub, chaparral. Occurring on sandy or rocky soils.
Southern California Black Walnut *Juglans californica*	Federal: None State: None CNPS: List 4.2	Chaparral, cismontane woodland, coastal sage scrub, alluvial surfaces

Federal
FE-Federally Endangered
FT-Federally Threatened

State
SE-State Endangered
ST-State Threatened

CNPS
List 1B - Plants rare, threatened, or endangered in California.
List 2 - Plants rare, threatened, or endangered in California, but more common elsewhere.
List 3 - Plants about which more information is needed.
List 4 - Plants with limited distribution (A watch list).

CNPS Threat Code extension
.1 – Seriously endangered in California (over 80% occurrences threatened)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

2.3.3 Special-Status Habitats Evaluated for the Project Site

A review of the CNDDB (July 2007) indicated that the following sensitive vegetation associations are known from the Corona North and Prado Dam quadrangles: southern cottonwood willow riparian forest, southern sycamore alder riparian woodland, southern willow scrub, California walnut woodland, and southern California arroyo chub/Santa Ana sucker stream. The Property was evaluated for these and other special-status habitats.

2.3.4 Vegetation Mapping

Vegetation communities within the overall Project Site were mapped according to Holland Classification System (Holland 1986). Where necessary, deviations were made when areas did not fit into exact habitat descriptions provided by Holland. Plant communities were mapped in the field directly on to a 200-scale (1" = 200') aerial photograph.

2.4 Wildlife Resources

Wildlife species were evaluated and detected during field surveys by sight, call, tracks, and scat. Site reconnaissance was conducted in such a manner as to allow inspection of the Project Site by direct observation, including the use of binoculars. Observations of physical evidence and direct sightings of wildlife were recorded in field notes during each visit. A complete list of wildlife species observed within the Project Site is provided in Appendix B. Scientific nomenclature and common names for vertebrate species referred to in this report follow Collins (1997) for amphibians and reptiles, Jones, et al. (1992) for mammals, and AOU Checklist (1998) for birds. The methodology (including any applicable USFWS survey protocols) utilized to conduct the focused surveys or the habitat assessments of each listed or special-status animal are discussed below.

2.4.1 General Surveys

Birds
During general surveys of the Project Site, birds were identified incidentally during surveys within each habitat type. Birds were detected by both direct observation and by vocalizations, and were recorded in field notes.

Mammals
During general surveys of the Project Site, mammals were identified incidentally during surveys within each habitat type. Mammals were detected both by direct observation and by the presence of diagnostic sign (i.e. tracks, burrows, scat, etc.).

Reptiles and Amphibians
During general surveys of the Project Site, reptiles and amphibians were identified incidentally during surveys within each habitat type. Habitats were examined for diagnostic reptile signs, which include shed skins, scat, tracks, snake prints, and lizard tail drag marks. All reptiles and amphibian species observed, as well as diagnostic sign, were recorded in field notes.

2.4.2 Special-Status Animal Species Evaluated for the Project Site

Table 2-3 provides a list of special-status animals evaluated for the Project Site through habitat assessments and focused surveys (where suitable habitat was present). Species were evaluated based on a number of factors, including: (1) species identified by the CNDDB as occurring (either currently or historically) on or in the vicinity of the property; and (2) any other special-status animals that are known to occur within the vicinity of the property, or for which potentially suitable habitat occurs on site.

Table 2-3. Special-Status Animals Evaluated for the Project Site

Species Name	Status	Habitat Requirements
Arroyo chub *Gila orcutti*	Federal: None State: None CDFG: CSC	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.
Bell's sage sparrow *Amphispiza belli belli*	Federal: FSC State: None CDFG: CSC	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.
Burrowing owl *Athene cunicularia*	Federal: FSC State: None CDFG: CSC	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.
Coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: None CDFG: CSC	Low elevation coastal sage scrub and coastal bluff scrub.
Delhi-sands flower-loving fly *Raphiomidas terminatus abdominalis*	Federal: FE State: None CDFG: None	Fine, sandy soils, often associated with wholly or partially consolidated dunes referred to as the "Delhi" series. Vegetation consists of a sparse cover, including California buckwheat, California croton, deerweed, and evening primrose.
White-tailed kite *Elanus leucurus*	Federal: FSC State: Fully Protected	Forages in open areas such as grasslands, agricultural lands and sparse scrublands. Nests in dense trees
Northern harrier *Circus cyaneus*	Federal: None State: None CDFG: CSC	Forages in open areas such as grasslands, agricultural lands and scrublands. Nests in marshes and other open areas.
Golden eagle *Aquila chrysaetos*	Federal: None State: Fully Protected CDFG: CSC	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.
Cooper's hawk *Accipiter cooperii*	Federal: None State: None CDFG: CSC	Generally prefers woodland habitats for nesting and foraging, including mature urban forest areas as well as riparian areas
Ferruginous hawk *Buteo regalis*	Federal: FSC State: None CDFG: CSC	Only present as wintering individuals. Prefers open grasslands and agricultural areas.
Merlin *Falco columbarius*	Federal: None State: None CDFG: CSC	Only present as wintering individuals. Forages in a variety of habitats including riparian areas such as present on the site.
Least Bell's vireo *Vireo bellii pusillus*	Federal: FE State: SE CDFG: None	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.
Long-eared owl *Asio otus*	Federal: None State: None CDFG: CSC	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.

Species Name	Status	Habitat Requirements
Northern red-diamond rattlesnake *Crotalus exsul*	Federal: None State: None CDFG: CSC	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.
Orange-throated whiptail *Cnemidophorus hyperythrus*	Federal: None State: None CDFG: CSC	Coastal sage scrub, chaparral, non-native grassland, oak woodland, and juniper woodland.
Santa Ana sucker *Catostomus santaanae*	Federal: FT State: None CDFG: CSC	Small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates.
Southern California rufous-crowned sparrow *Aimpohila ruficeps canescens*	Federal: None State: None CDFG: CSC	Grass covered hillsides, coastal sage scrub, and chaparral.
Southwestern pond turtle *Clemmys marmorata pallida*	Federal: FSC State: None CDFG: CSC	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.
Southwestern willow flycatcher *Empidonax traillii extimus*	Federal: FE State: SE CDFG: None	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.
Stephens' kangaroo rat *Dipodomys stephensi*	Federal: FE State: ST CDFG:	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.
Tricolored blackbird *Agelaius tricolor*	Federal: FSC State: None CDFG: CSC	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.
White-faced ibis (nesting colony) *Plegadis chihi*	Federal: FSC State: None CDFG: CSC	Winter foraging occurs in wet meadows, marshes, ponds, lakes, rivers, and agricultural fields. Requires extensive marshes for nesting.
Western mastiff bat *Eumops perotis californicus*	Federal: FSC State: None CDFG: CSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.
Western yellow bat *Lasiurus xanthinus*	Federal: None State: SE CDFG:	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal: None State: SE CDFG:	Dense, wide riparian woodlands with well-developed understories.
Yellow warbler *Dendroica petechia*	Federal: None State: None CDFG: CSC	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland. During migration, forages in woodland, forest, and shrub habitats.
Yellow-breasted chat *Icteria virens*	Federal: None State: None CDFG: CSC	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.

Federal	State	CDFG
FE-Federally Endangered	SE-State Endangered	CSC-California Species of Concern
FT-Federally Threatened	ST-State Threatened	
FSC-Federal Species of Concern		

2.4.3 Focused Surveys for the Western Burrowing Owl

The western burrowing owl (*Athene cunicularia hypugea*) is a federal and state species of concern. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrub characterized by low-growing vegetation. Burrows are essential for successful breeding. This owl will occupy abandoned rodent burrows and man-made structures such as culverts, pipes, and debris piles.

Where potentially suitable habitat was present within the Project Site, focused surveys were conducted for the burrowing owl to satisfy the requirements of CEQA. Initial focused surveys were conducted following guidelines established and recognized by the California Burrowing Owl Consortium (CBOC) and the California Department of Fish and Game (CDFG). Additional surveys in 2007, conducted first during the wintering season, followed by surveys during the early portion of the breeding season were not focused on presence/absence since presence was confirmed during multiple surveys. Rather, these surveys were aimed at more accurately determining the location and numbers of burrowing owls using the site and were therefore conducted mostly during morning daylight hours when the owls were most likely at their burrows.

Initial habitat assessments of the Project Site to identify burrows (and artificial structures) with the potential to support burrowing owls were conducted on April 12, May 13, and May 23, 2005. The initial habitat assessment included an evaluation of a 150-meter (approximately 500 feet) buffer zone around the Project Site to account for owls that may occupy burrows offsite, but potentially forage within the Project Site. The property was initially evaluated by traversing the property on foot and through the use of binoculars. Focused breeding season and wintering surveys (minimum of four survey visits respectively within areas of suitable habitat) were conducted through a combination of traversing the suitable habitat areas on foot, and through the observation of these areas at a distance with binoculars. The presence of burrowing owls was evaluated through direct observation of owls and through the detection of diagnostic sign (i.e., whitewash, pellets, bones, features, food caches, etc.) at burrows. Survey visits during the breeding season were conducted on May 23, June 6, June 14, and July 3, 2005. As noted above, survey visits during the wintering season were conducted on January 25 and 29, February 2 and 24, with additional breeding season surveys on March 14, 24, and 30, and April 14, 2007.[2]

[2] The CBOC recommends that wintering surveys be conducted between December 1 and January 31. Furthermore, surveys are recommended to start one hour before sunrise extending to two hours after sunrise or should start two hours before sunset, finishing one hour after sunset. As such, two of the four subject surveys extended beyond the recommended date. Similarly, many of the surveys were conducted outside of the recommended periods relative to sunrise or sunset. Three points should be noted relative to the seasonality and daily timing of the surveys. First, the CBOC protocol for burrowing owl surveys is a set of guidelines or recommendations, specifically for determining presence/absence and number of owls and associated burrow complexes. As such, professional judgment is also important and in this case, the familiarity of the GLA biologists with the owls on the site allowed for deviation from

Table 2-4(a). 2005 Burrowing Owl Survey Personnel and Weather Information

Date	Observer	Time (Hrs)	Temperature (°F)	Wind Speed (Mph)	Cloud Cover
05/23/05	D. Klepeis	5:15-7:00	59-62	0-1	Overcast
06/6/05	D. Klepeis E.Bomkamp	5:00-7:00	59	3-4	Broken
06/14/05	D. Klepeis J. Ahrens	5:20-7:30	57-60	2-3	Overcast
07/3/05	D. Klepeis	5:45-7:30	60 - 65	0 - 1	Overcast

Table 2-4(b). 2007 Burrowing Owl Survey Personnel and Weather Information

Date	Observer	Time (Hrs)	Temperature (°F)	Wind Speed (Mph)	Cloud Cover
01/25/07	J.Ahrens	9:30 –1:30	71 - 79	2-3	Clear
01/29/07	J.Ahrens	8:45-1:00	68 – 73	1	Partly Cloudy
02/02/07	J. Ahrens	2:25-12:00	59 –64	0-4	Clear
02/24/07	J.Ahrens	7:10-11:30	62 – 73	3-5	Clear
03/14/07	J.Ahrens	7:30-11:35	61 – 66	0-2	Partly Cloudy
03/24/07	T. Bomkamp	5:15-7:30	54 – 58	0-1	Partly Cloudy
03/30/07	J. Ahrens	7:00 – 11:30	47 - 50	2-4	Clear
04/14/07	T. Bomkamp	5:30-7:30	57-60	2-4-	Cloudy

2.4.4 Focused Surveys for Southwestern Willow Flycatcher

The eastern boundary of the Project Site contains a portion of Mill Creek, which has some potential to support nesting southwestern willow flycatchers (*Empidonax trailii extimus*), a federal and state endangered bird. The southwestern willow flycatcher is a small, insectivorous songbird, which is drab olive-brown above with a white throat and a pale yellow belly. It is one of four subspecies of willow flycatchers recognized in North America, and is distinguished by subtle differences in color and morphology. SWF breed in riparian habitats along rivers, streams, or other wetlands characterized by dense willows and shrubs in woodlands with standing water. To determine if southwestern willow flycatcher occurs on site, a presence/absence survey following USFWS protocol was conducted.

A biologist (Robert Hamilton, TE-799557) holding a valid 10(a)(1)(A) permit from USFWS conducted a nesting season presence/absence survey for southwestern willow flycatcher. Surveys

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the protocol (detailed observations of known owls was only possible during daylight hours). Second, wintering burrowing owls have been recorded on wintering grounds into March (personal communication from Mr. Peter Bloom) meaning that surveys into February as conducted here are totally appropriate. Thirdly, and most importantly, at least one burrowing owl occurrence was detected on each of the dates meaning that the surveys were fully adequate relative to the seasonality and timing of the surveys.

for southwestern willow flycatcher were conducted on May 31, June 14, July 2, July 8, and July 17, 2005. A separate report of these results, entitled *Report on 2005 Southwestern Willow Flycatcher Surveys, Edgewater Lake Communities, Chino, San Bernardino County,CA, Glenn Lukos Associates Project No. 0697-1,* was filed with USFWS on July 21, 2005, and a copy is included in this report as Appendix C.

2.4.5 Focused Surveys for Least Bell's Vireo

The eastern boundary of the Project Site is adjacent to Mill Creek, which has potential to support nesting least Bell's vireo (*Vireo bellii pusillus*), a state- and federally-listed endangered bird. Additionally, all portions of the property located below the 543-foot elevation contour, including Mill Creek, have been designated as Critical Habitat for the least Bell's vireo. The least Bell's vireo is a small, gray, migratory songbird that inhabits riparian habitats of nine southern California counties. The breeding season generally extends from April 10 through July 31.

Much of the area designated as critical habitat consists of agricultural fields, and thus has no potential to support breeding or foraging least Bell's vireo. Presence/absence surveys following USFWS protocol were conducted to determine if least Bell's vireo occurs/breeds within suitable habitat associated with the section of Mill Creek within the Project site. The survey protocol consists of eight surveys with at least ten days between site visits during the breeding season conducted in all areas of suitable habitat. Surveys for least Bell's vireo were conducted on April 12, April 22, May 2, May 13, May 23, June 15, July 3, and July 13, 2005.

Table 2-5. Least Bell's Vireo Survey Personnel and Weather Information

Date	Observer	Time (Hrs)	Temperature (°F)	Wind Speed (Mph)	Cloud Cover
04/12/05	D.Klepeis J.Ahrens	6:30–10:00	63-80	0-1	Broken
04/22/05	D. Klepeis T.Bomkamp	7:00-9:30	64-78	0-1	Broken
05/02/05	D.Klepeis J.Ahrens	6:30-10:30	65-75	0-3	Clear
05/13/05	D. Klepeis E.Bomkamp	7:30-10:15	64-80	0-1	Broken
05/23/05	D. Klepeis	7:00-10:00	62-67	0-1	Overcast
06/15/05	D. Klepeis E.Bomkamp	7:15-9:30	65-75	1-2	Broken
07/03/05	D. Klepeis E.Bomkamp	7:30-10:15	60-63	2-3	Overcast
07/13/05	D. Klepeis P.McIntyre	7:30-10:00	66 - 68	0 - 1	Overcast

2.4.6 Focused Surveys for Western Yellow-billed Cuckoo

The western yellow-billed cuckoo requires habitat made up of large expanses of riparian forest (such as is found in the nearby Prado Basin). Due to the fact that the site does not contain such habitat, surveys were not conducted.

2.4.7 Focused Surveys for Wintering Raptors

Because the project site has potential to support special-status wintering raptors, including ferruginous hawk, merlin, and golden eagle, each of which is considered sensitive by CDFG when wintering, focused winter raptor surveys were conducted January 25 and 29, February 2 and 24, and March 14 and 30, 2007. These surveys were conducted by traversing the project site on foot and observing all raptor activity with the aid of binoculars. All raptor species were identified, and behavior, including circling, perching, attempts, and kills noted and locations of the behaviors were noted on a map of the project site.

2.5 Jurisdictional Delineation

The project site was evaluated for the presence of areas subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act as well as the Department of Fish and Game pursuant to Section 1600 of the California Fish and Game Code. Areas evaluated included Mill Creek, which is located near the eastern site boundary as well as a number of artificial agricultural ponds that serve a variety of functions including waterwater storage/treatment, irrigation, and stock watering.

Prior to beginning the field delineation a 200-scale color aerial photograph, a 200-scale topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps/CDFG jurisdiction.[3] Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[4] (Wetland Manual) and the 2006 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement).[5]. While in the field the limits of CDFG jurisdiction were recorded onto a 200-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

[3] Glenn Lukos Associates, July 18, 2007. Letter Report addressed to Mr. Edward Callan.

[4] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[5] U.S. Army Corps of Engineers. 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement. Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

3.0 REGULATORY SETTING

The Edgewater Communities development project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including state- and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

3.1 State and/or Federally Listed Plants or Animals

3.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) 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 FESA, CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate 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 CESA, "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 memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

3.1.2 Federal Endangered Species Act

The FESA of 1973 defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that 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 in Section 3(18) of FESA: "...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 that result in injury to, or death of species 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 that 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 FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan .
- Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with CDFG on projects with potential impacts on state-listed species. These provisions also require CDFG to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFG to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

3.2 Corps and CDFG Jurisdiction

3.2.1 U.S. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
> *(2) All interstate waters including interstate wetlands;*
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
>
> > *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
> > *(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
> > *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...*
>
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
> *(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
> *(6) The territorial seas;*
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the 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 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.*

The term “wetlands” (a subset of “waters of the United States”) 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...a prevalence of vegetation typically adapted for life in saturated soil conditions." The discharge of dredge or fill material into waters of the United States,

including wetlands requires authorization from the Corps prior to impacts. The location of all jurisdictional waters subject to Corps and/or CDFG is provided on Exhibit 8.

3.2.2 California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

Diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife, require authorization from CDFG by means of entering into an agreement pursuant to Section 1601 or 1603 of the Fish and Game Code.

3.3 California Environmental Quality Act

3.3.1 CEQA Guidelines Section 15380

The California Environmental Quality Act (CEQA) requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFG recognizes that plants on Lists 1A, 1B, or 2 of the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFG also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

3.3.2 Non-Listed Special-Status Plants and Animals Evaluated Under CEQA

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are to be

considered federal Species of Concern (FSC). This term is employed in this document, but carries no official protections. All references to federally-protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS. For this report the following acronyms are used for federal special-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
- FC Federal candidate species (former C1 species)
- FSC Federal Species of Concern (former C2 species)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (SPOC) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFG's CNDDB project. Informally listed taxa are not protected, 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.
For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State candidate for listing as Endangered
- SCT State candidate for listing as Threatened
- SFP State Fully Protected
- SP State Protected
- SPOC California Special Concern Species

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in California. The California Native Plant Society's Seventh Edition (Online) of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of Rare, Threatened, or Endangered vascular plant species of California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFG. CNPS has developed five categories of rarity that are summarized in Table 3-1.

Table 3-1. CNPS Lists 1, 2, 3, & 4.

CNPS List	Comments
List 1A – Presumed Extinct in California	Thought to be extinct in California based on a lack of observation or detection for many years.
List 1B – Rare or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
List 2 - Rare or Endangered in California, More Common Elsewhere	Species that are rare in California but more common outside of California
List 3 – Need More Information	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific list. In addition, many of the List 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
List 4 – Plants of Limited Distribution	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for List 3 species above, CNPS lacks survey data to accurately determine status in California. Many species have been placed on List 4 in previous editions of the "Inventory" and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.

Table 3-2. CNPS Threat Code Extensions

Threat Code Extension	Comments
.1	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2	Fairly endangered in California (20-80% occurrences threatened)
.3	Not very endangered in California (<20% of occurrences threatened or no current threats known)

4.0 RESULTS

This section provides the results of habitat assessments, focused surveys for special-status plants and wildlife, and for the jurisdictional delineation of the Edgewater Communities Project Site. A full list of all flora and fauna observed on site is included in the floral and faunal compendiums [Appendix A and Appendix B].

4.1 General Reconnaissance Surveys

The majority of the property consists of actively disced agricultural fields and pastures, and highly disturbed cattle corrals. Ruderal vegetation is found throughout these areas, and dominant species include bull thistle (*Circium vulgare*), hare barley (*Hordeum leporinum*), spiny cocklebur (*Xanthium spinosum*), Italian ryegrass (*Lolium multifolrum*), Bermuda grass (*Cynodon dactylon*), tocalote (*Centaurea melitensis*), ripgut brome (*Bromus diandrus*), five-hook bassia (*Bassia hyssopifolia*), black mustard (*Brassica nigra*), horehound (*Marrubium vulgare*), high mallow (*Malva sylvestris*), Johnson grass (*Sorghum halepense*), and annual bluegrass (*Poa annua*).

The eastern boundary of the site is includes a portion of Mill Creek. Riparian species dominant on the banks of the creek include arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), and mulefat (*Baccharis salicifolia*), with dominant understory plants including tree tobacco (*Nicotiana glauca*), peppergrass (*Lepidium latifolium*), willow smartweed (*Polygonum lapathifolium*), California bulrush (*Scirpus californicus*), sunflower (*Helianthus annuus*), and California mugwort (*Artemisia douglasiana*).

4.2 Vegetation Mapping

During vegetation mapping of the Project Site, nine different vegetation/land use types were identified. Table 4-1 provides a summary of vegetation types/land used and the corresponding acreage. Detailed descriptions of each type follow the table. A Vegetation Map is attached as Exhibit 3. Site photographs depicting the various vegetation types and land uses are attached as Exhibit 4.

Table 4-1. Summary of Vegetation/Land Use Types for the Project Site

Land Use or Vegetation Cover	Acres
Disced Agricultural Field	144.52
Disturbed/Developed	56.16
Open Water/Stock Ponds	10.53
Open Water/Mill Creek	1.62
Pasture	28.28
Riverine Wash	0.92
Ruderal	15.90
Southern Willow Forest	5.73
Southern Willow Scrub	9.23
Total	**272.9**

4.2.1 Disced Agricultural Field

Approximately 144.52 acres of disced agricultural fields are associated with the Project Site. The agricultural fields are mostly devoid of vegetation due to routine discing.

4.2.2 Disturbed / Developed

Approximately 56.16 acres of disturbed/developed areas are associated with the Project Site. This includes dirt roads, barren sites, and structures associated with the cattle corrals and residential structures. These areas are mostly devoid of vegetation, except for locally dense patches of weeds and/or ornamental trees and shrubs.

4.2.3 Open Water/Stock Ponds

Approximately 10.53 acres of open water associated with agricultural and stock ponds occurs on the Project Site. These areas are highly disturbed, with the margins of the ponds vegetated by weedy non-native species.

4.2.4 Open Water/Mill Creek

Approximately 1.62 acres of open water is associated with the portion of Mill Creek within the Project Site.

4.2.5 Pasture

Approximately 28.28 acres of pasture is associated with the Project Site. The pasture areas are highly disturbed due to the presence of cattle. Portions of the pasture are mostly devoid of vegetation. Species that occur within the pasture areas are mostly non-native and include bull thistle (*Cirsium vulgare*), castor bean (*Ricinus communis*), ripgut brome (*Bromus diandrus*), horehound (*Marrubium vulgare*), fennel (*Foeniculum vulgare*), jimson weed (*Datura wrightii*), spiny cocklebur (*Xanthium spinosum*), sunflower (*Helianthus annuus*), hare barley (*Hordeum leporinum*) and Bermuda grass (*Cynodon dactylon*). The native alkaline-tolerant forb alkali heliotrope (*Heliotropum curassavicum*) is also found within the pasture areas on site.

4.2.6 Riverine Wash

Approximately 0.92 acre of riverine wash associated with Mill Creek is located on the eastern edge of the Project Site. This area is mostly open with a sandy/cobbly substrate interspersed with small patches of mulefat (*Baccharis salicifolia*) and arroyo willow (*Salix lasiolepis*). Other less dominant species within the riverine wash area include willow smartweed (*Polygonum lapathifolium*), sunflower (*Helianthus annuus*), five-hook bassia (*Bassia hyssopifolia*), sand bur (*Ambrosia acanthicarpa*), horseweed (*Conyza canadensis*), and tree tobacco (*Nicotana glauca*).

4.2.7 Ruderal

Approximately 15.90 acres of ruderal vegetation occur within the Project Site. Ruderal vegetation consists mostly of non-native species such as black mustard (*Brassica nigra*), horseweed (*Conyza canadensis*), jimson weed (*Datura wrightii*), willow smartweed (*Polygonum lapathifolium*), Russian thistle (*Salsola tragus*), lamb's quarters (*Chenopodium album*), sunflower (*Helianthus annuus*), bull thistle (*Circium vulgare*), and five-hook bassia (*Bassia hyssopifolia*). However, several large black willow trees (*Salix goodingii*) and cottonwood trees (*Populus fremontii*) are interspersed within ruderal areas adjacent to Mill Creek.

4.2.8 Southern Willow Forest

Approximately 5.73 acres of willow forest associated with Mill Creek occur on the eastern edge of the Project Site. This association is dominated by mature black willow (*Salix goodingii*) and arroyo willow (*Salix lasiolepis*), with and understory of mulefat (*Baccharis salicifolia*), sweet clover (*Melilotus albus*) and horseweed (*Conyza canadensis*). Other trees found within willow forest include California black walnut (*Juglans californica*), and cottonwood (*Populus fremontii*). Additional understory species include tree tobacco (*Nicotana glauca*), giant reed (*Arundo donax*), sunflower (*Helianthus annuus*), sandbur (*Ambrosia acanthicarpa*), and willow smartweed (*Polygonum lapathifolium*).

4.2.9 Southern Willow Scrub

Approximately 9.23 acres of willow scrub associated with Mill Creek occur on the eastern edge of the Project Site. Dominant vegetation includes small individuals of black and arroyo willow, and mulefat. Understory species include nettle (*Urtica urens*), willow smartweed (*Polygonum lapathifolium*), giant reed (*Arundo donax*), sandbur (*Ambrosia acanthicarpa*), and sunflower (*Helianthus annuus*). Small patches of cattail (*Typha domingensis*) are found adjacent to Mill Creek within the willow scrub.

4.3 Focused Plant Surveys

One special status species, southern California black walnut (*Juglans californica*) was detected on site on the bank of Mill Creek. No other special-status plants are expected to occur due to the highly disturbed nature of the site.

4.4 Wildlife Surveys

Birds commonly observed on or in the vicinity of the site include killdeer (*Charadrius* vociferous), rock pigeon (*Columbia livia*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), least Bell's vireo (*Vireo bellii pusillus*), bushtit (*Psaltriparus minimus*), house wren (*Troglodytes aedon*), European starling (*Sturnus vulgaris*), yellow warbler (*Dendroica coronata*), common yellowthroat (*Geothlypis trichas*), yellow breasted chat (*Icteria virens*), spotted towhee (*Pipilo erythrophthalmus*), song sparrow

(*Melospiza melodia*), blue grosbeak (*Guiraca caerulea*), red winged blackbird (*Agelaius phoeniceus*), Brewer's blackbird (*Euphagus cyanocephalus*), brown headed cowbird (*Molothrus ater*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Carduelis tristis*), red-tailed hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*), and house sparrow (*Passer domesticus*). Waterfowl commonly observed on or in the vicinity of the site include cinnamon teal (*Anas cyanoptera*), black-necked stilt (*Himantopus mexicanus*), mallard (*Anas platyrhynchos*), and white-faced ibis (*Plegadis chihi*).

Reptiles observed on site include western fence lizard (*Sceloporus occidentalis*). Amphibians detected during site reconnaissance include western toad (*Bufo boreas*), Pacific treefrog (*Hyla regilla*), and bullfrog (*Rana catesbeiana*).

Mammals observed on site include the domestic cow (*Bos taurus*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), and coyote (*Canis latrans*).

4.4.1 Western Burrowing Owl Surveys

The western burrowing owl is designated as a Federal Species of Concern as well as a California Species of Concern. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrub characterized by low-growing vegetation. Burrows are essential for successful breeding. The burrowing owl will occupy abandoned rodent burrows and man-made structures such as culverts, pipes, and debris piles. The burrowing owl nesting season begins as early as February and continues through August, with peak nesting occurring between April and July. The wintering season extends from September 1 through January 31, with peak wintering occurring from December 1 through January 31.

GLA biologists conducted focused surveys within areas of suitable habitat on site to confirm the presence/absence of burrowing owls through direct observation of owls and through the detection of diagnostic sign (i.e., whitewash, pellets, bones, features, food caches, etc.) at burrows. Breeding season survey visits were conducted on May 23, June 6, June 14, and July 3, 2005 and again on March 14, March 24, March 30, and April 14, 2007. In addition, surveys during the wintering season were conducted on January 25, January 29, February 2, and February 24, 2007. Four pairs of burrowing owls were observed on site throughout the 2005 survey period, and three additional individuals and/or pairs were observed offsite, but within 500 feet of the project site. All pairs on site were found at the northern section of the property among cattle corrals and settling ponds. During 2007, only a single pair and one unpaired individual were detected onsite. One pair and two unpaired owls were detected offsite, east of the project within 500 feet of the potential impact area.[6] A map depicting the locations of the burrowing owl pairs observed on site is included as Exhibit 5 [Biological Resources Map]. Tables 2-4a and 2-4b above, summarizes the survey dates and weather information for each survey date.

[6] Because the "off-site" owls were on private property under different ownership, the level of certainty of the pair/un-paired status for the single owls is lower as it was only possible to observe the owls from a distance, from Comet Avenue.

4.4.2 Southwest Willow Flycatcher Surveys

A biologist (Robert Hamilton, TE-799557) holding a valid 10(a)(1)(A) permit from USFWS conducted a nesting season presence/absence survey for southwestern willow flycatcher. Surveys for southwestern willow flycatcher were conducted on May 31, June 14, July 2, July 8, and July 17, 2005. A separate report of these results, entitled *Report on 2005 Southwestern Willow Flycatcher Surveys, Edgewater Lake Communities, Chino, San Bernardino County, CA, Glenn Lukos Associates Project No. 0697-1*, was filed with USFWS on July 21, 2005, and a copy is included in this report as Appendix C. Survey conditions, including survey lengths and weather conditions, are tabulated in the report.

According to the report, no southwestern willow flycatchers were heard vocalizing or observed on site, nor are they expected to occur on site due the marginally suitable nesting habitat on site.

4.4.3 Least Bell's Vireo Surveys

Surveys for least Bell's vireo were conducted on April 12, April 22, May 2, May 13, May 23, June 15, July 3 and July 13, 2005. All surveys were conducted between dawn and 11:00 a.m. All suitable areas were covered on foot by walking slowly and methodically through the riparian habitat. The presence/absence of least Bell's vireo was determined by identifying all birds by sight and call, aided by the use of binoculars. No taped vocalizations were used to elicit response from the vireos or any other species potentially present.

Weather conditions during the surveys were conducive to a high level of bird activity. Surveys were conducted between sunrise and 11:00 a.m. Temperatures ranged from approximately 62 degrees Fahrenheit to 80 degrees Fahrenheit. Wind speeds ranged from 0-3 miles per hour during the surveys. Table 2-5 above summarizes the survey dates and weather information for each survey date.

Over the course of the eight surveys, three male least Bell's vireos were heard vocalizing on site. A map depicting the location of these individuals is included as Exhibit 5.

Mapping of Suitable Habitat for Least Bell's Vireo is shown on Exhibit 8 along with the areas designated as Critical Habitat by USFWS.

All areas of the site below the 543-foot elevation contour are within designated critical habitat for least Bell's vireo, but much of this area consists of agricultural fields and ruderal areas with no potential to support vireo. Therefore, GLA utilized field data including the known locations of vireos on site and the vegetation map to delineate the portion of the site with potential to support nesting and/or foraging vireos. This suitable LBV habitat area is depicted on Exhibit 8.

4.4.4 Wintering Raptor Surveys

As noted above, surveys for wintering raptors were conducted during the wintering season on January 25, January 29, February 2, February 24, March 14, March 24 and March 30, 2007.

Excluding burrowing owl, which is addressed above, a total of nine raptor species were detected during the wintering season surveys. Common species with no special status included American kestrel, red-tail hawk, and turkey vulture were detected on the site. Special-status wintering raptors are addressed below and the results are summarized in Table 4-4 below:

Table 4-2. Species Recorded during Wintering Raptor Surveys

Species/Date	Jan 25	Jan 29	Feb 2	Feb 24	Mar 14	Mar 24	Mar 30	Total Observations *	Behaviors Observed
American Kestrel	2	-	1	1	1	1	1	*7*	Perched
Burrowing Owl	2	1	1	2	1	2	1	*10*	At Burrow
Cooper's Hawk	-	1	1	1	1	-	1	*5*	Soaring & Foraging
Ferruginous Hawk	1	1	-	-	-	-	-	*2*	Perched
Merlin	1	-	-	-	-	-	-	*1*	In-transit
Northern Harrier	-	-	-	-	-	-	1	*1*	In transit/ Foraging
Prairie Falcon	1	-	-	-	-	-	-	*1*	Perched
Red-tailed Hawk	4	2	3	3	2	2	1	*17*	Foraging, Perched & Soaring
Turkey Vulture	-	8	-	2	1	1	12	*24*	Soaring
White-tailed Kite	-	-	-	-	-	1	-	*1*	Foraging
Total	*11*	*13*	*6*	*9*	*7*	*7*	*18*	N/A	

* Total Observations do not infer abundance.

4.4.5 Special-Status Animals Observed at the Project Site

In addition to burrowing owl and least Bell's vireo, nine other special-status animal species were observed at the Project Site during general and focused biological surveys. These include white tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), ferruginous hawk (*Buteo regalis*), Cooper's hawk (*Accipiter cooperii*), merlin (*Falco columbarius*), Prairie Falcon (*Falco mexicanus*), white-faced ibis (*Plegadis chihi*), double-crested cormorant (*Phalacrocorax auritus*), yellow warbler (*Dendroica petechia*), and yellow breasted chat (*Icteria virens*). These species are discussed in more detail below.

White-Tailed Kite (*Elanus leucurus*)

The white-tailed kite, a state fully protected species occurs through much of California, extending into Oregon and down into Mexico. Its numbers are decreasing alarmingly in coastal southern California. Approximately 4 pairs nest within the Prado Basin and forage in adjacent grasslands and agricultural fields. A single individual was observed on a single occasion foraging over the open pasture areas slightly southeast of the center of the site. Given that this species nests in the

immediate vicinity but observed on only a single occasion during all surveys conducted on the site, it is likely an occasional but predicable visitor to the site.

Northern Harrier (*Circus cyaneus*)

The northern harrier is a CDFG Species of Special Concern. This species ranges across all of North America, wintering across most of the southern United States and into Mexico. The northern harrier is now one of the rarest nesting raptors in southwestern California. Northern harriers mostly winter in southern California. A single northern harrier was observed foraging on the site on a single occasion during all of the surveys conducted on the site, it is likely an occasional but predictable visitor to the site.

Ferruginous Hawk (*Buteo regalis*)

The ferruginous hawk is a CDFG Species of Special Concern. This species breeds in much of the southwest and northwest United States and into Canada, wintering across portions of the southwest United States and into Mexico. A single ferruginous hawk was observed on the site on two occasions in late January and is likely only an occasional but predictable visitor to the site during the wintering season.

Merlin (*Falco columbarius*)

The merlin is a CDFG Species of Special Concern. This species ranges across much of North America, breeding mostly in Canada and Alaska and wintering across most of the western and southern United States and into Mexico. Observations in southern California are restricted to wintering individuals. A single merlin was observed foraging on the site on a single occasion during all of the surveys conducted on the site, it is likely only a rare or occasional visitor to the site.

Prairie Falcon (*Falco mexicanus*)

The prairie falcon is a CDFG Species of Special Concern. This species ranges across western North America, breeding from Canada to northern Mexico. A single prairie falcon was observed flying over the site on a single occasion and can be considered a rare but predictable element of the local avifauna particularly between July and February.

Cooper's Hawk (*Accipiter cooperi*)

The Cooper’s hawk is a CDFG Species of Special Concern. Cooper’s hawks are found in woodland habitats. The Cooper’s hawk is a wide-ranging species in North America that breeds from British Columbia eastward to Nova Scotia and southward to northern Mexico and Florida. Its nesting range includes southern British Columbia, northwestern Montana, Wyoming, eastern North Dakota, southern Manitoba, western Ontario, northern Michigan, southern Ontario, Southern Quebec, Maine, and Nova Scotia, south to Baja California, south-central Texas, Louisiana, central Mississippi, central Alabama, and central Florida. They prey primarily on birds

but they are known to eat small mammals, reptiles, amphibians, insects and fish. A Cooper's hawk was observed perching on site, and may breed on-site.

Double-Crested Cormorant (*Phalacrocorax auritus*)

The double-crested cormorant is a CDFG Species of Special Concern (breeding areas only), which breeds across North America. This species is a colonial nester on coastal cliffs and offshore islands and along lake margins in the interior of the state. The double-crested cormorant nests usually on the ground with sloping surface, or in tall trees along lake margins. A single individual of this species was observed on site during one of the southwest willow flycatcher survey dates. However, this species will not breed onsite as there is no suitable habitat for the establishment of a breeding colony.

White-faced ibis (*Plegadis chihi*)

White-faced ibis is a Federal and CDFG species of concern when in a breeding colony. Winter foraging occurs in wet meadows, marshes, ponds, lakes, rivers, and agricultural fields. However, this species requires extensive marshes for nesting. Individual white-faced ibis were observed foraging within the project site, but no suitable nesting habitat for this species is located within the project site.

Yellow Warbler (*Dendroica petechia*)

The yellow warbler, which is a CDFG Species of Special Concern, is a migratory songbird that breeds in riparian habitats in southern California. This species exhibits habitat requirements similar to the yellow-breasted chat and least Bell's vireo. Suitable habitat typically consists of multi-layered riparian scrub or willow woodland corridors along flowing streams. Yellow warblers were observed along Mill Creek during surveys for southwestern willow flycatcher and least Bell's vireo. Yellow warblers are likely to breed on site within the willow scrub associated with Mill Creek.

Yellow-Breasted Chat (*Icteria virens*)

The yellow-breasted chat, which is a CDFG Species of Concern, is a migratory songbird that breeds in riparian habitats in southern California. This species exhibits habitat requirements similar to least Bell's vireo. Suitable habitat typically consists of multi-layered riparian scrub or willow woodland corridors along flowing streams. Yellow -breasted chats were observed along Mill Creek during surveys for southwestern willow flycatcher and least Bell's vireo. Yellow-breasted chats are likely to breed on site within the willow scrub associated with Mill Creek.

4.4.6 Special-Status Animals with the Potential to Occur at the Project Site

Besides the special-status animals observed on site one other species, the long-eared owl, has some potential to occur on site due the presence of potentially suitable habitat. Long-eared owl has some potential to occur within the mature southern willow forest, but not within the proposed impact area. Egrets and herons are considered special-status species when rookeries are present;

however, there are no rookeries present on the site, thus while individual egrets and herons were detected on the site (including a winter roost of black-crowned night herons along Mill Creek), they are not accorded special-status for this project due to the lack of breeding sites (i.e., rookeries).

4.5 Raptor Habitat

The Project Site provides foraging habitat for a number of raptor species, including some special-status raptors[7] and two pairs of resident red-tailed hawks one of which nests on-site. Raptors detected onsite include red-tailed hawk, American kestrel, turkey vulture, barn owl, great horned owl, and the special status burrowing owl, white-tailed kite, and Cooper's hawk as well three wintering species, ferruginous hawk, northern harrier, and merlin observed twice, once and once respectively. The property is flat, with broad open expanses of most of which consists of agricultural fields that are regularly disked and cultivated as well as limited areas with, ruderal vegetation and disturbed areas, While the majority of the property (i.e., agricultural areas) provides limited habitat for a rodent populations, limited areas such as the ruderal areas and cattle pens provide habitat ground squirrels, brush rabbits, pocket gophers, and mice. In addition to providing foraging habitat, portions of the Project Site along Mill Creek support mature black and arroyo willow trees and eucalyptus, which provide suitable breeding habitat for raptors and foraging habitat for Cooper's hawk, as well as at least occasional foraging habitat for wintering raptors.

4.6 Nesting Birds

The Project Site contains trees, shrubs, and ground cover that provide suitable habitat for nesting migratory birds, including raptors as discussed above. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.[8]

4.7 Jurisdictional Waters

Regulatory specialists from GLA visited the Project Site on January 17, 2006 and again on March 24, 2007 to identify waters subject to the jurisdiction of the Corps, CDFG and the Regional Water Control Board. Mill Creek, which is located on the eastern edge of the project site, is subject to the jurisdiction of the Corps, CDFG, and Regional Board. The proposed project has been designed to fully avoid impacts to Mill Creek.

Stock Ponds

[7] Birds in the Falconiformes order [i.e. hawks and falcons] and owls are both treated as "raptors" for the purposes of this document.

[8] 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). In addition, 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.

A network of stock ponds/settling basins is located in the northern section of the property in close proximity to the existing stock pens. Two additional stock ponds receive wastewater from the cattle operations and are located in the central and south-central portions of the property. These ponds were not included in the delineation, as they were excavated in upland solely for the purpose of treating agricultural waste, and comprise a closed system that does not discharge into any jurisdictional waters. Impacts to the ponds do not require authorization from the Corps as discussed in more detail in the Jurisdictional Delineation and as addressed in the excerpt below from the Jurisdictional Delineation report:

> Agricultural ponds, such as those described above, are generally not subject to Corps jurisdiction as set forth in the Preamble to CFR 323.3:
>
> *For clarification it should be noted that we generally do not consider the following waters to be "Waters of the United States." However, the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these catagories of waters is a water of the United States. EPA also has the right to determine on a case-by-case basis if any of these waters is a "water of the United States."*
>
> *(a) Non-tidal drainage and irrigation ditches excavated on dry land.*
> *(b) Artificially irrigated areas which would revert to upland if the irrigation ceased.*
> *(c)* ***Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used for such purposes as stock watering, irrigation, settling basins or rice growing***. [Emphasis added]

Similarly, the agricultural ponds do not meet CDFG's definition of a lake or stream and would not be considered jurisdiction pursuant to Section 1600 of the Fish and Game Code.

Mill Creek

A section of Mill Creek is located within and roughly coincident with the eastern boundary of the project site. Mill Creek is a perennial creek supported by urban and agricultural runoff. The channel has a substrate of cobbles and silt, and large areas of riparian vegetation and wetlands. The banks are steep and the creek is incised to roughly five to ten feet below the upland portion of the project site. Woody riparian vegetation associated with Mill Creek includes arroyo willow (*Salix lasiolepis*), black willow (*Salix goodingii*), and scattered cottonwood (*Populus fremontii*). Dominant understory vegetation includes mulefat (*Baccharis salicifolia*), tree tobacco (*Nicotiana glauca*), sweet clover (*Melilotus albus*), horseweed (*Conyza canadensis*), and willow smartweed (*Polygonum lapathifolium*). Other understory species include giant reed (*Arundo donax*), sunflower (*Helianthus annuus*), and sandbur (*Ambrosia acanthicarpa*).

4.7.1 Corps Jurisdiction

Waters of the U.S., including wetlands, subject to the jurisdiction of the Army Corps of Engineers are limited to the segment of Mill Creek on the eastern boundary of the project site Urban flows from the proposed project will be routed into three bioswales with discharge points outside of Corps jurisdiction. Mill Creek is within the property boundary but is outside of the development footprint and will be fully avoided by the proposed project. Also as noted above, none of the agricultural ponds would be subject to jurisdiction under Section 404 of the Clean Water Act.

4.7.2 Regional Water Quality Control Board Jurisdiction

There are no waters within the proposed impact area that are subject to the jurisdiction of the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. Urban flows from the proposed project will be routed into three bioswales with discharge points outside of Corps and CDFG jurisdiction associated with Mill Creek. The proposed project impacts will not require authorization from the Regional Board.

4.7.3 CDFG Jurisdiction

There is no CDFG jurisdiction, including vegetated riparian habitat, associated with the proposed project impact area. CDFG jurisdiction, including vegetated riparian habitat, associated with the Project Site, is limited to the section of Mill Creek that is coincident with the eastern property boundary. It should be noted that there are a few stands of willow forest and willow scrub adjacent to the creek that are not directly associated with the creek (i.e. the trunks are growing from the upland area above the bank). These areas should not be subject to CDFG jurisdiction. The boundary of CDFG jurisdiction adjacent to the proposed project site is depicted on the enclosed delineation map, and will be fully avoided by the proposed project [Exhibit 7]. Urban flows from the proposed project will be routed into three bioswales with discharge points outside of CDFG jurisdiction.

5.0 IMPACTS

The following discussion examines the potential impacts to plant and wildlife resources that may occur as a result of implementation of the project. Project-related impacts can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or wildlife, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Other impacts, such as loss of foraging habitat, can occur although these areas or habitats are not directly removed by project development; i.e., indirect impacts. Indirect impacts can also involve the effects of increases in ambient levels of noise or light, unnatural predators (i.e., domestic cats

and other non-native animals), competition with exotic plants and animals, and increased human disturbance such as hiking and dumping of green waste on site. Indirect impacts may be associated with the subsequent day-to-day activities associated with project build-out, such as increased traffic use, permanent concrete barrier walls or chain-link fences, exotic ornamental plantings that provide a local source of seed, etc., which may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by exotics, and changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites. Potential adverse effects, either directly or through habitat modifications, on any special-status plant, animal, or habitat that could occur as a result of project development are discussed below.

5.1 California Environmental Quality Act

5.1.1. Thresholds of Significance

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California**:**

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether, a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..."*

The purpose of this analysis is to provide sufficient information, associated with the site, that allows for a determination whether impacts to biological resources are considered potentially

significant (before considering offsetting mitigation measures) where one or more of the criteria discussed below would result from implementation of the proposed project.

5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

> *a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
>
> *b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
>
> *c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
>
> *d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*
>
> *e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*
>
> *f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

5.2 Vegetation/Land Use Impacts

If the project were constructed as currently proposed, it would result in impacts to approximately 252.31 acres of lands, as detailed below in Table 5-1. The remainder of the vegetation/land uses to be impacted are not native communities, and vegetation impacts would not be adverse.

Table 5-1. Summary of Impacts to Vegetation/Land Use Types for the Project Site

Land Use or Vegetation Cover	Total (Acres)	Impacted (Acres)**
Disced Agricultural Fields	144.52	144.52
Disturbed/Developed	56.16	55.84
Open Water/Mill Creek	1.62	0
Open Water/Stock Ponds	10.53	10.54
Pasture	28.28	28.27
Riverine Wash	0.92	0.00
Ruderal	15.90	10.91
Southern Willow Forest	5.44	0.005
Southern Willow Scrub	9.23	0.35
Total	**272.60**	**250.43**

** Impact totals include 30.14 acres of Agricultural Field, Ruderal Area, Developed Area and Open Water west of Mill Creek that will be restored to native grassland following project grading.

5.3 Special-Status Plants

One-special-status plant, California black walnut (*Juglans californica*), was detected on site on the bank of Mill Creek. Vegetation associated with Mill Creek, including California black walnut, is not being impacted as part of the proposed project.

5.4 Special-Status Animals

Eleven special-status animal species were detected on site, including double-crested cormorant, white-faced ibis, white-tailed kite, northern harrier, merlin, prairie falcon, Cooper's hawk, least Bell's vireo, yellow warbler, yellow-breasted chat, and western burrowing owl. In addition, one other special status animal, long-eared owl has the potential to occur on site.

Adverse impacts associated with foraging individuals of white-faced ibis and double-crested cormorant would not occur, as these species are given special-status only while in nesting colonies, which do not occur within any areas subject to grading. Further, while nesting colonies were not detected within the reach of Mill Creek that traverses the site, potential use by nesting colonies would be sufficiently buffered by project open space to ensure that no adverse impacts occur. Cooper's hawk also has special status only when nesting, and no adverse impacts are associated with this species provided that impacts are avoided to any nesting Cooper's hawks. Least Bell's vireo, yellow warbler, and yellow-breasted chat will nest only within the riparian vegetation associated with Mill Creek. As the proposed project avoids impacts to riparian vegetation, no adverse impacts to Least Bell's vireo, yellow warbler, and yellow-breasted chat are associated with the proposed project.

Four breeding pairs of western burrowing owl were detected in the northern portion of the property among the cattle corrals and settling ponds in 2005 along with one offsite pair and two offsite individuals. Surveys in 2007 found only one onsite breeding pair and one individual with one offsite pair and two unpaired individuals. Impacts to up to four breeding pairs of western burrowing owls onsite would be adverse prior to mitigation. Indirect impacts from construction noise to offsite pairs and/or individuals would also be adverse.

Least Bell's Vireo Critical Habitat

As previously discussed, all portions of the property located below the 543-foot elevation contour, including Mill Creek, have been designated as Critical Habitat for the least Bell's vireo. The extent of critical habitat within the Prado Flood Control Basin consists of "All lands below the 543-foot contour in partially surveyed T3S, R7W within the Prado Flood Control Basin[9]". Consequently, much of the area, totaling 39.72 acres within the project site mapped as critical habitat, consists of upland agricultural fields, cattle facilities, and ruderal areas that have no potential to support breeding or foraging least Bell's vireo, and do not exhibit any of the primary constituent elements of suitable vireo habitat, which generally includes riparian woodland vegetation that generally includes both canopy and shrub layers, and includes some associated upland habitats. The Final Rule for the designation of critical habitat for LBV states that: "In cases where areas designated as critical habitat do not contain the primary constituent elements, impacts occurring within this area will not result in a finding of adverse modification by the Service. Thus, designation of critical habitat will not affect those areas within the legal critical habitat boundaries that do not contain vireo nesting or foraging habitat". A map depicting the 543-foot elevation contour/designated critical habitat line is enclosed as Exhibit 8.

Primary Constituent Elements

Primary constituent elements, as stated in 50 CFR 424.12, include but are not limited to, the following:

- Space for individual and population growth, and for normal behavior;
- Food, water, or other nutritional or physiological requirements;
- Cover or shelter;
- Sites for breeding, reproductions, rearing of offspring; and generally;
- Habitats that are protected from disturbance or are representative of the historic geographical and ecological distribution of a species.

In the case of LBV, The Service has determined that the habitat features vital for the vireo are riparian woodland vegetation that generally contains both canopy and shrub layers, and includes some associated upland habitats. Vireos meet their survival and reproductive needs (food, cover, nest sites, nestling and fledgling protection) within the riparian zone in most areas. In some areas they also forage in adjacent upland habitats. Examples of these adjacent upland habitats suitable for foraging include native scrub [e.g. coyote brush scrub] that support insect prey favored by the

[9] 1994. Federal Register, Volume 59, Number 22.

vireo. Upland non-native grassland, ruderal areas, and agricultural fields do not provide adequate foraging habitat for vireos.

As depicted on Exhibit 8 -LBV Habitat Map, all potentially suitable breeding and/or foraging habitat for vireo occurs outside of the development footprint. Development of the proposed project will not result in any direct impacts to vireo or to suitable habitat for vireo.

5.5 Nesting Birds

As previously discussed, the Project Site has some potential to support nesting migratory birds. Impacts to such species are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.[10] Removal of vegetation occupied by active nests would be considered a violation of the MBTA. In order to ensure that such impacts do not occur, the measures set forth under Section 6.2 below will be implemented to ensure that impacts to nesting birds are fully avoided.

5.6 Raptor Habitat

The proposed project would result in the loss of foraging habitat for raptors, including special-status raptors that have the potential to occur on site, including wintering raptors such as ferruginous hawk, merlin and northern harrier. Because of the potential to impacts raptor foraging habitat, the impacts to each raptor identified on the site is addressed separately below.

American Kestrel

The American kestrel is one of the most widespread and abundant raptor species in North America. It is also very common in southern California, using a wide variety of habitats including residential areas. The loss of foraging area would not result in an adverse impact to this species.

Burrowing Owl

Much of foraging area for the burrowing owl consists of animal pens, wastewater treatment areas and agricultural fields. While these areas do not represent native habitat, they nevertheless provide foraging areas for the burrowing owl, which consistently occupies the site, ranging from two to four breeding pairs as well as a small number of unpaired individuals. The loss of foraging areas is considered adverse prior to mitigation. With mitigation, the impacts would be reduced to an acceptable level.

[10] 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). In addition, 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.

Cooper's Hawk

Suitable foraging habitat for the Cooper's hawk is associated with the riparian habitat supported by Mill Creek. All of this habitat will be protected and buffered by the project. As such, there will be no adverse impacts to foraging areas for the Cooper's hawk.

Ferruginous Hawk

Ferruginous hawks are winter visitors to southern California and forage in grassland areas and to a lesser extent in agricultural areas, where a suitable prey base occurs. This species was observed on two occasions, four days apart, in January of 2007 and was observed perching and potentially foraging. Nevertheless, its absence from the site during all subsequent surveys indicates that the habitat is not important for winter foraging for this species and impacts to foraging habitat would not be considered adverse.

Merlin

A single observation of a merlin, which was moving across the site, was made on January 25, 2007. No foraging activity was observed and no further observations of this species were made during the subsequent six surveys. The primary diet of merlins consists of small songbirds, which will continue to be abundant on the site in the post project condition. As such, no adverse impacts to foraging habitat of the merlin are associated with the project.

Northern Harrier

A single observation of a northern harrier was made on March 30, 2007, which was moving across the site in the typical near-ground foraging pattern. Typical foraging areas for the harrier include marshlands, areas of low scrub and grasslands. Foraging habitat for this species is sub-optimal and impacts to harrier foraging habitat would not be adverse.

Prairie Falcon

A single observation of a perched prairie falcon was made on January 25, 2007. No foraging activity was observed and no further observations of this species were made during the subsequent six surveys. In some studies, 90-percent of the diet of prairie falcons consists of song birds with mourning doves and western meadow larks their most common prey. In other studies, mammals make up approximately one-half of the prey with songbirds accounting for the remainder. Based on the single observation, the site does not appear to be important for the prairie falcon, nevertheless, in the post project condition, a substantial prey base will occur in the eastern portion of the site and no adverse impacts to foraging area are associated with the project.

Red-tailed Hawk

The red-tailed hawk is the most common Buteo in North American and continues to increase in many areas, often to the detriment of other hawk species. The loss of potential foraging habitat is not considered adverse for this species.

Turkey Vulture

All observations of the turkey vulture consisted of soaring individuals. Foraging was never observed on the site. The turkey vulture remains widespread and common across most of North America, numbers have increased during the last few decades, and the breeding range has expanded to the north. The project would have no adverse impacts on foraging opportunities for this species.

White-tailed Kite

A single observation of a foraging white-tailed kite was made on March 24, 2007; however, no attempts to take prey were observed before the individual moved off the site. Foraging habitat for this species is sub-optimal due to the regular disking of the site in conjunction with dispersion of nutrient-laden water for agricultural purposes is expected to reduce potential vole populations. Therefore, potential impacts to white-tailed kite foraging habitat are not expected to be adverse.

When potential raptor impacts are considered individually, only impacts to burrowing owl are considered to be potentially adverse. However, because the site is used by a diversity of species, even at relatively low frequencies/densities, the loss of foraging habitat for species that forage in open areas such as the red-tail hawk and white-tailed kite are potentially adverse. With mitigation, any potential impacts to raptor foraging would be reduced to an acceptable level.

5.7 Jurisdictional Waters

The Project, as proposed, would not result in impacts to any Waters of the United States subject to the jurisdiction of the Corps, or streams/lakes subject to the jurisdiction of CDFG, as the project is designed to completely avoid Mill Creek and associated riparian habitat. The onsite stock ponds are not subject to the jurisdiction of the Corps or CDFG. Urban flows from the proposed project will be routed into three bioswales with discharge points outside of Corps jurisdiction. As such; the Project will not require a Section 404 permit from the Corps, Section 1602 Streambed Alteration Agreement from CDFG, or a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

5.8 Indirect Effects

For many development projects constructed adjacent to areas of native habitat, indirect impacts are often associated with various phases of the development project, beginning at the time of initial grading and construction, and possibly continuing indefinitely. These impacts may occur as a

single event, or can interact cumulatively to adversely affect native wildlife, plants, and their habitats.

Increased recreational and residential use, for example, can contribute to increased indirect impacts to native plants and vegetation communities. Where such impacts occur, they lead to further risk of disturbance resulting from vehicle use and human-caused incidences such as fire. Disturbance tends to drive native communities toward a higher percentage of non-native, weedy species, affecting plant and animal species distribution within a given area. Non-native plants, as an example, when used in landscaping or in livestock feed can escape and become naturalized, causing degradation of natural communities.

Since the proposed Project Site includes a section of Mill Creek that is to be preserved, the Project has the potential to indirectly affect biological resources occurring within Mill Creek and adjacent preserved open space. Development in proximity to Mill Creek and adjacent preserved open space may result in edge effects with the potential to adversely affect biological resources. To minimize such edge effects, the project will Project Design Features (PDFs) to address the following:

- Drainage;
- Toxics;
- Lighting;
- Noise;
- Invasives;
- Barriers; and
- Grading/Land Development.

The eastern edge of the proposed Project Site encompasses Mill Creek, which is proposed for conservation as open space. Additionally, open space/park space is to be set aside as permanent open space adjacent to Mill Creek. As such, without appropriate design, the proposed Project has the potential to indirectly affect biological resources in Mill Creek. As discussed in Section 7.0 below, the Project will incorporate PDFs to ensure that indirect affects to biological resources will not be adverse.

5.8.1 Drainage

The Project shall incorporate design features, including those required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to Mill Creek (if any) is not altered in any way when compared with existing conditions. These design features may include bioswales to treat nuisance flows from the proposed development.

5.8.2 Toxics

No Toxics are associated with the proposed development. All applications of fertilizer and pesticide within common areas will be regulated by a pest/turf management plan, which will

conform to current applicable standards. Residential areas have the potential to release toxics in addition to fertilizers and pesticides, however, including herbicides, trash, and household chemicals.

5.8.3 Lighting

Night lighting from the proposed park areas has the potential to cause indirect effects to wildlife within the open space areas and Mill Creek. In order to prevent such impacts, the use of night lighting within the park areas will be minimized to the greatest extent practicable. Additionally, all night lighting will be directed away from Mill Creek and will be fully shielded. Spill of light onto surrounding properties, and "night glow" can be reduced by using hoods and other design features on light fixtures. Inclusion of these design features in the project is addressed through standard conditions of approval, plan check, permit procedures, and code enforcement practices. Potential impacts associated with glare will be reduced to acceptable levels through these standard practices and procedures. As such, these design features will ensure that ambient lighting is not increased within the open space area within and adjacent to Mill Creek.

5.8.4 Noise

Bird species sensitive to noise, including least Bell's vireo, are known to nest in the reach of Mill Creek adjacent to the project site. The open space adjacent to Mill Creek will serve as a buffer between the residential development and Mill Creek, mitigating any potential noise related impacts to wildlife within the Creek. During construction, grading associated with the project has the potential to impact nesting vireos.

5.8.5 Invasives

The proposed Project will avoid the use of invasive and non-native plant species identified by Cal-IPC. The final landscape plans will be reviewed and verified by the City of Chino to ensure that invasive species will not be used. Maintenance of the landscape areas will include the removal of invasives that may establish through natural dispersal mechanisms.

5.8.6. Grading/Land Development

The Project has been designed so that areas of grading will be contained within the boundaries of the development footprint and will not extend into the Conservation Area.

5.9 Level of Impacts After Mitigation

With the mitigation measures as described above, impacts to biological resources (both direct and indirect) will be reduced to acceptable levels.

6.0 MITIGATION MEASURES

The following mitigation measures are recommended to ensure that impacts to sensitive resources and habitats as a result of the proposed project are reduced to acceptable levels.

6.1 Special-Status Animals

Burrowing Owl

As previously stated, impacts to breeding pairs of western burrowing owl would be considered adverse prior to mitigation. In order to mitigate for impacts to burrowing owls, the following measures should be implemented. With implementation of these measures, impacts to the burrowing owl would be reduced to acceptable levels.

a) Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department verifies through noninvasive 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;

b) 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. To the extent feasible, onsite preservation, with active relocation should occur onsite within the 30.14-acre open space area. If the remaining onsite habitat is not adequate than the owls should be moved to an off-site location approved by the Department and USFWS via active translocation;

c) 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;

d) If owls must be moved away from the disturbance area, either passive or active relocation techniques may be implemented with the approval of the Department and USFWS. Prior to implementing either passive or active relocation, a relocation plan will be prepared and submitted to the Department and USFWS for review and approval; and

e) 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.

6.2 Nesting Bird Mitigation

If vegetation is to be removed during the nesting season, recognized from February 1 through August 31, a qualified biologist will conduct a nesting bird survey of potentially suitable nesting vegetation no more than three days prior to vegetation removal. If active nests are identified

during nesting bird surveys, then the nesting vegetation will be avoided until the nesting event has completed and the juveniles can survive independently from the nest. The biologist will flag the nesting vegetation and will establish an adequate buffer around the nesting vegetation. Clearing/grading shall not occur within the buffer until the nesting event has completed.

6.3 Raptor Habitat

As previously stated, impacts to raptor foraging habitat would be potentially adverse prior to mitigation. As mitigation for losses to raptor foraging and breeding areas, 30.14 acres adjacent to Mill Creek will be preserved and revegetated with native grassland (following temporary grading), with additional open space to be preserved that includes riparian areas and limited upland habitat east of Mill Creek totaling 22.88 acres in addition to the 30.14-acre grassland restoration area for total preservation of 53.02 acres. With the preservation of open space associated with and adjacent to Mill Creek, potential impacts to raptor foraging will be reduced to acceptable levels. As noted to optimize raptor foraging in the 30.14-acre area, the area will be revegetated with native bunchgrasses with low densities of native shrubs that are typically associated with native grasslands (e.g., grassland goldenbush – *Ericameria palmeri pachylepis*).

As noted in the impact section, impacts to individual wintering raptors, due to a combination of the limited site use and sub-optimal habitat associated with the farmed areas would not be adverse. However, as discussed further below, certain project design features, in addition to the 53.02 acres of which 30.14 acres would be optimal for species that forage in grasslands such as red-tailed hawk and white-tailed kite would enhance the foraging suitability for all species of raptors, which have been observed on the site.

6.4 Construction Noise Impacts on Mill Creek

In order to ensure that grading within the vicinity of Mill Creek will not result in adverse impacts, grading will be restricted to outside of the nesting season if practicable. If it is not possible to limit grading to outside of the nesting season, then a noise monitoring program may be implemented during the breeding season to ensure that noise levels do not exceed 60 dBA in the immediate vicinity of nesting vireos. If noise levels exceed 60 dBA, then the construction equipment array will be modified/reduced until noise levels are reduced to below the 60 dBA threshold. If this is not possible, then sound walls may be utilized to reduce the noise to below allowable thresholds.

7.0 PROJECT DESIGN FEATURES

7.1 Project Design Features to Address Potential Indirect Effects

7.1.1 Drainage

The Project shall incorporate design features, including those required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and

quality of runoff discharged to Mill Creek (if any) is not altered in any way when compared with existing conditions. These design features may include bioswales to treat nuisance flows from the proposed development.

7.1.2 Toxics

No Toxics are associated with the proposed development, except fertilizers and pesticides used in the park areas adjacent to Mill Creek. All applications of fertilizer and pesticide will be regulated by a pest/turf management plan, which will conform to current applicable standards. Residential areas have the potential to release toxics in addition to fertilizers and pesticides, however, including herbicides, trash, and household chemicals.

7.1.3 Lighting

Night lighting from the proposed park areas has the potential to cause indirect effects to wildlife within the open space areas and Mill Creek. In order to prevent such impacts, the use of night lighting within the park areas will be minimized to the greatest extent practicable. Additionally, all night lighting will be directed away from Mill Creek and will be fully shielded. Spill of light onto surrounding properties, and "night glow" can be reduced by using hoods and other design features on light fixtures. Inclusion of these design features in the project is addressed through standard conditions of approval, plan check, permit procedures, and code enforcement practices. Potential impacts associated with glare will be reduced to acceptable levels through these standard practices and procedures. As such, these design features will ensure that ambient lighting is not increased within the open space area within and adjacent to Mill Creek.

7.1.4 Noise

Bird species sensitive to noise, including least Bell's vireo, are known to nest in the reach of Mill Creek adjacent to the project site. The open space adjacent to Mill Creek will serve as a buffer between the residential development and Mill Creek, mitigating any potential non-construction noise related impacts to wildlife within the Creek.

During construction, grading associated with the project has the potential to impact nesting vireos.

7.1.5 Invasives

The proposed Project will avoid the use of invasive and non-native plant species identified by Cal-IPC. The final landscape plans will be reviewed and verified by the City of Chino to ensure that invasive species will not be used. Maintenance of the landscape areas will include the removal of invasives that may establish through natural dispersal mechanisms.

7.1.6 Barriers and Signage

The Project will incorporate buffers to minimize indirect effects to Mill Creek. These will include landscaped areas with "barrier plantings", appropriate signage, and fences/walls restricting access to Mill Creek and conserved open space areas.

7.2 Lakes and Associated Lake-edge Habitat

As noted in the project description in Section 1.2 above, substantial portions of the lake edges will be used for creation of willow riparian and emergent marsh areas that are intended to provide habitat for wide range of avifauna including songbirds, waterfowl, shore birds, herons and egrets, and raptors. Specific species targeted by the lake-edge habitat creation include the state and federally listed least Bell's vireo and southwestern willow flycatcher, as well as other special-status species such as yellow-breasted chat and yellow warbler.

In addition, the lake areas and associated riparian and marsh habitats would provide additional foraging areas for Cooper's hawk, wintering sharp-shinned hawk, and merlins. Additionally, the marsh habitats would provide potential foraging areas for the northern harrier. The rich avifauna supported by these habitats would also increase the prey base for species such as the prairie falcon, while the open water and associated waterfowl would provide foraging opportunities to the peregrine falcon, which could become an occasional visitor for foraging. Preservation of the 53.02 acres with restoration of 30.14 acres to native grassland habitats following temporary grading would provide foraging opportunities for white-tailed kite, wintering ferruginous hawks, wintering merlins, wintering northern harriers, as well as for the common American kestrel and red-tailed hawk as described in the mitigation section above.

8.0 CERTIFICATION

*"**CERTIFICATION**: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief."*

DATE:_____ SIGNED:_____

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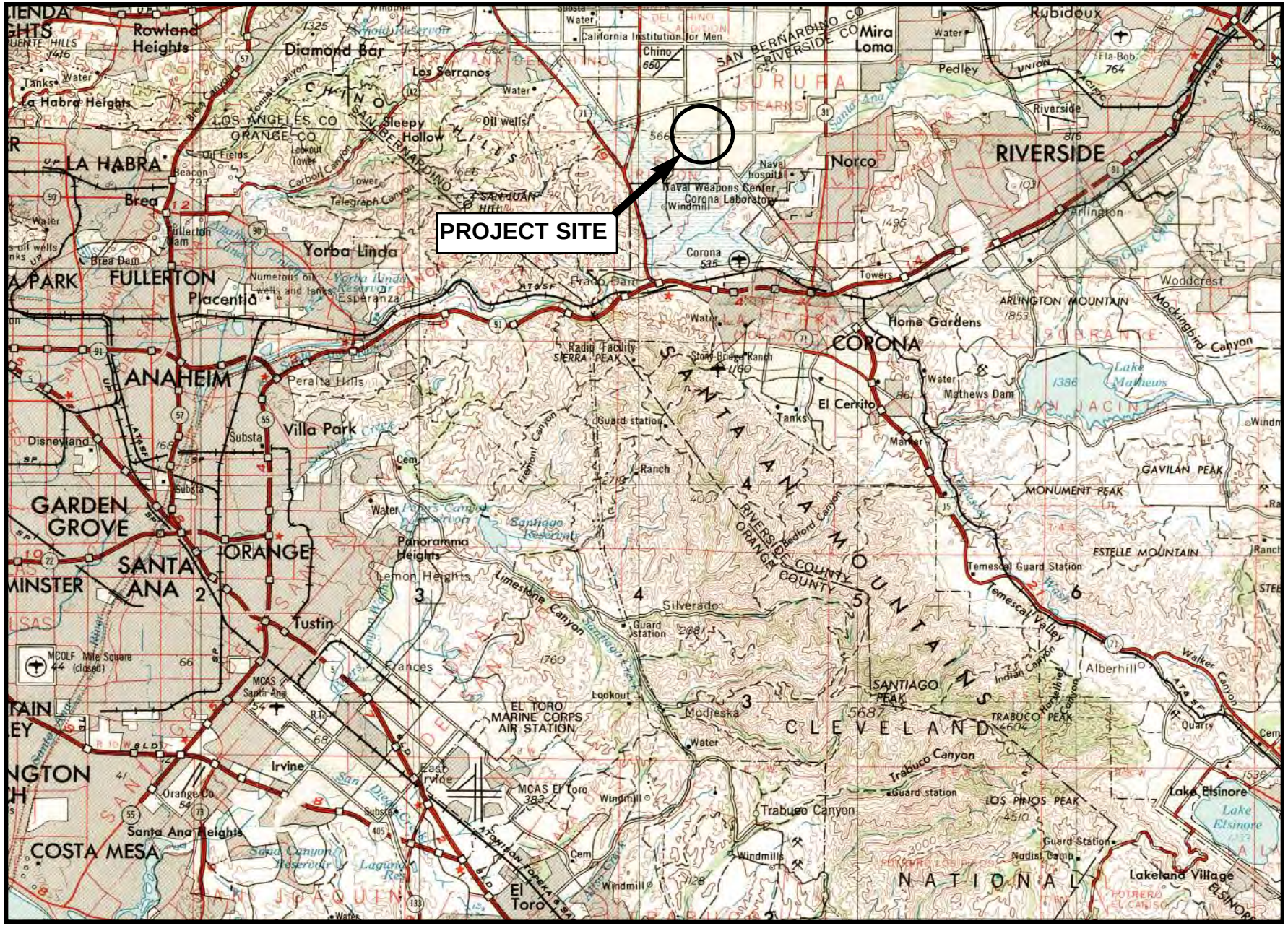
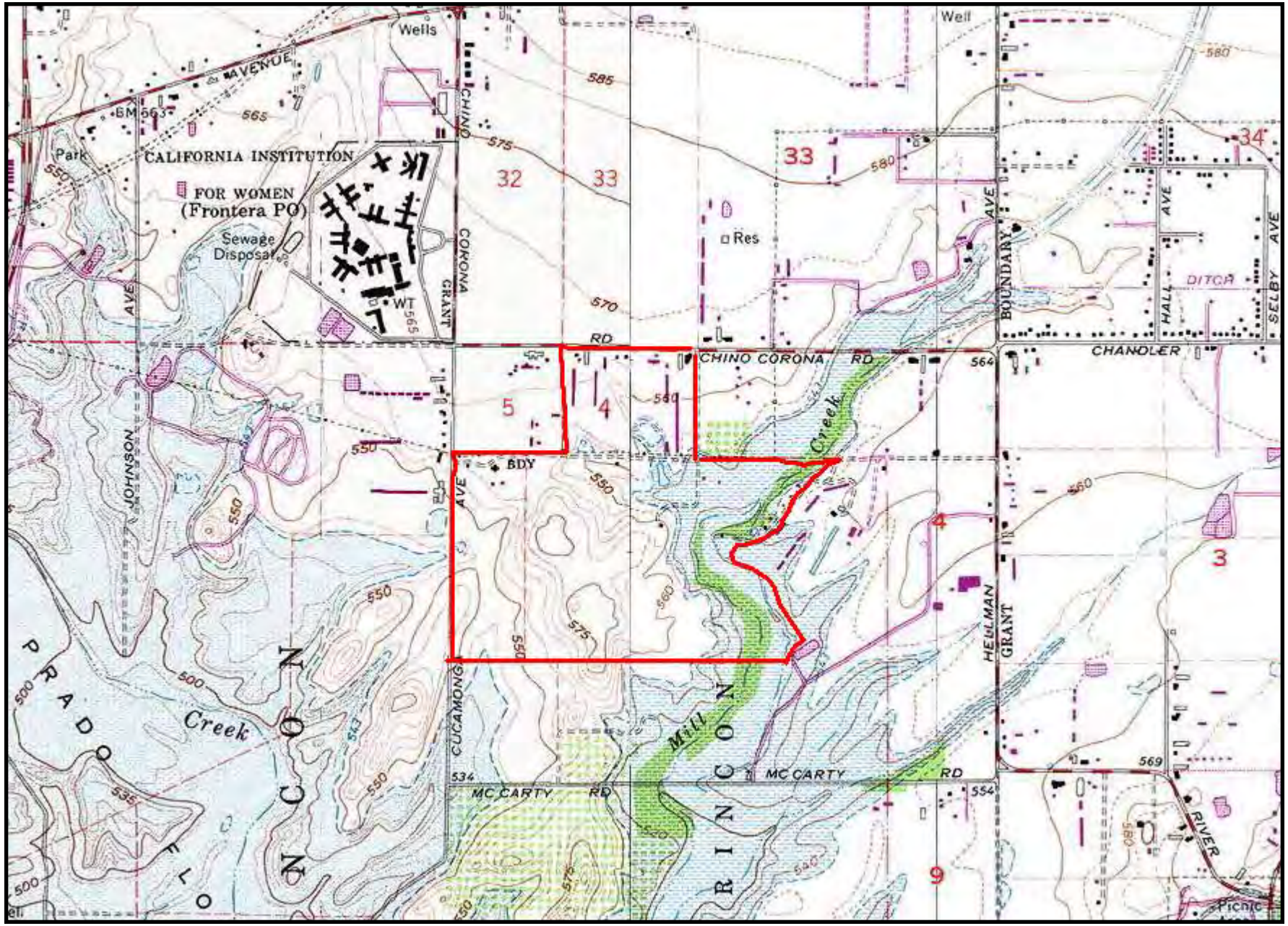


EDGEWATER COMMUNITIES

Regional Map

GLENN LUKOS ASSOCIATES

EXHIBIT 1



EDGEWATER COMMUNITIES

Vicinity Map

GLENN LUKOS ASSOCIATES

EXHIBIT 2


Legend
Project Boundary
Disced Agricultural Field
Disturbed/Developed
Open Water/Stock Pond
Open Water/Creek
Pasture
Riverine Wash
Ruderal
Southern Willow Forest
Willow Scrub
0 100 200 400
Feet
EDGEWATER COMMUNITIES
Vegetation Map
GLENN LUKOS ASSOCIATES
Exhibit 3

PHOTOGRAPH 1. East-facing view of Mill Creek, which will be completely avoided by the proposed project.

PHOTOGRAPH 2. East-facing view of Southern Willow Scrub associated with Mill Creek, which will be completely avoided by the proposed project.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

EDGEWATER COMMUNITIES

Site Photographs

PHOTOGRAPH 3. North-facing view of abandoned dairy facilities near the northern edge of the project site.

PHOTOGRAPH 4 View of disced agricultural fields that are characteristic of much of the project site.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

EDGEWATER COMMUNITIES

Site Photographs

Legend

- Project Boundary
- Study Area (Occupied or potential habitat)
- Least Bell's Vireo Male/Pair

2005 Burrowing Owl Location

- Individual Owl
- Pair of Owls

2007 Burrowing Owl Location

- Individual Owl
- Pair of Owls

N

0 250 500 1,000

Feet

EDGEWATER COMMUNITIES

Burrowing Owl/Least Bell's Vireo Location Map

GLENN LUKOS ASSOCIATES

Exhibit 5

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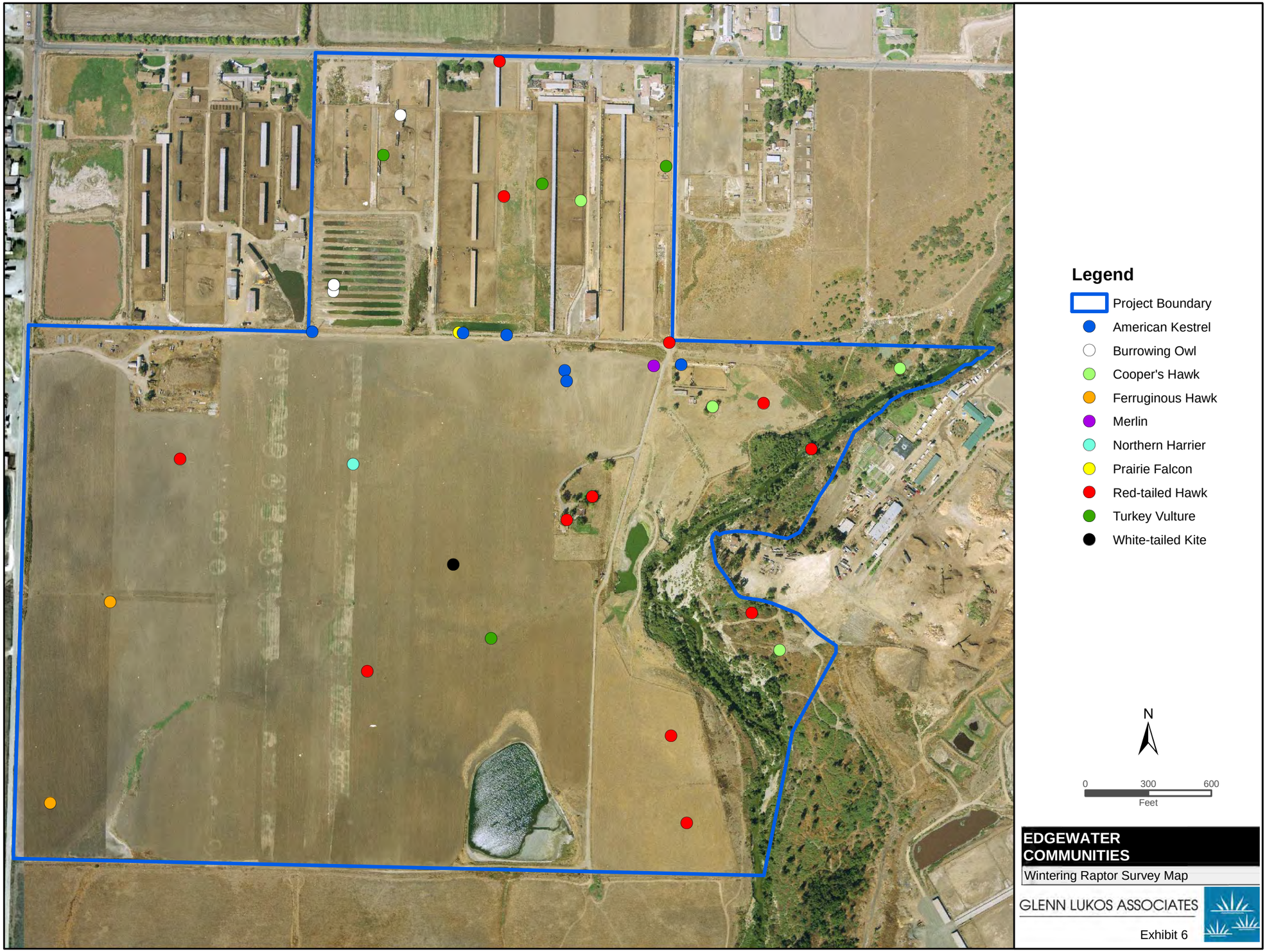

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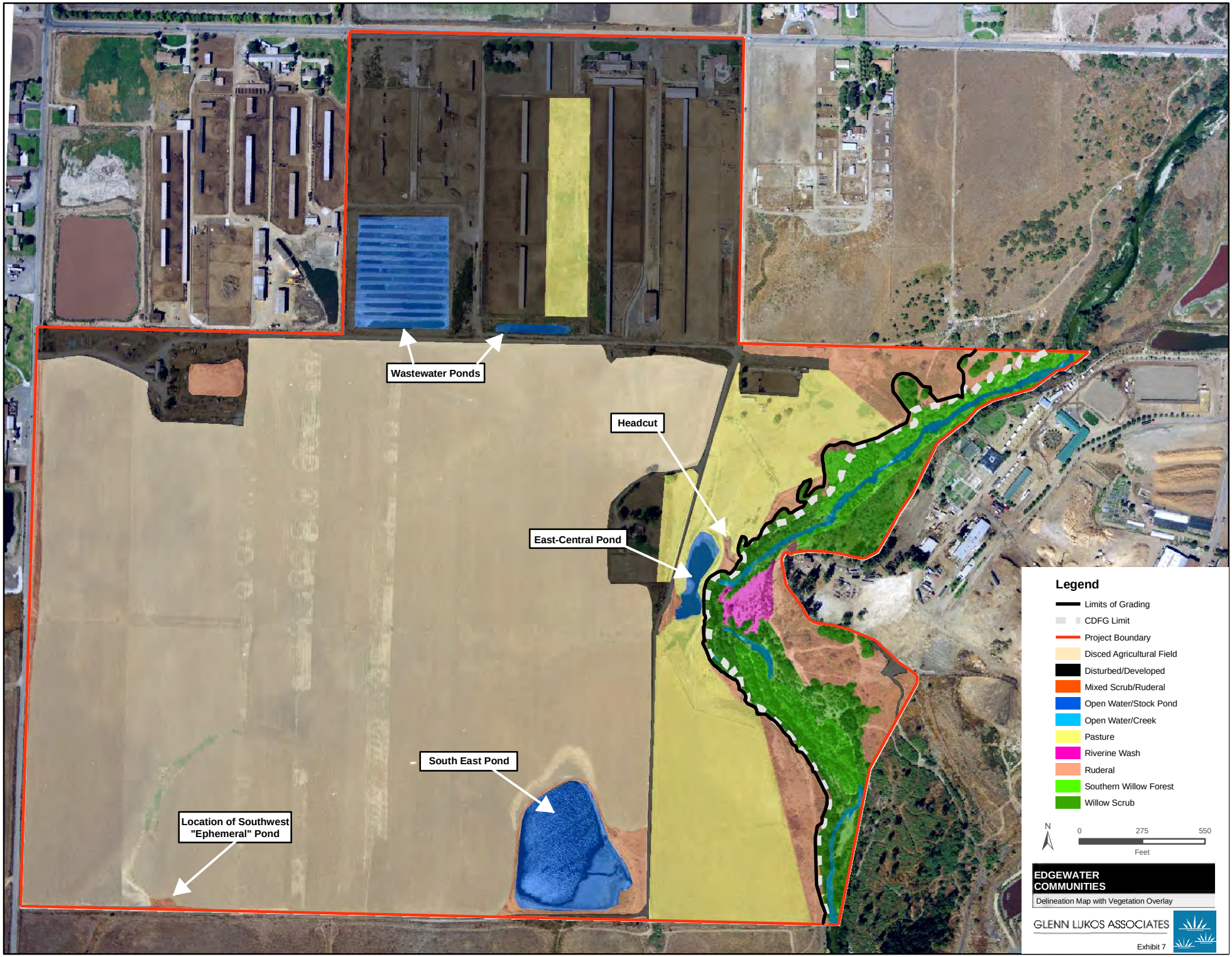
Wastewater Ponds
Headcut
East-Central Pond
South East Pond
Location of Southwest "Ephemeral" Pond
Legend
Limits of Grading
CDFG Limit
Project Boundary
Disced Agricultural Field
Disturbed/Developed
Mixed Scrub/Ruderal
Open Water/Stock Pond
Open Water/Creek
Pasture
Riverine Wash
Ruderal
Southern Willow Forest
Willow Scrub
N
0
275
550
Feet
EDGEWATER COMMUNITIES
Delineation Map with Vegetation Overlay
GLENN LUKOS ASSOCIATES
Exhibit 7
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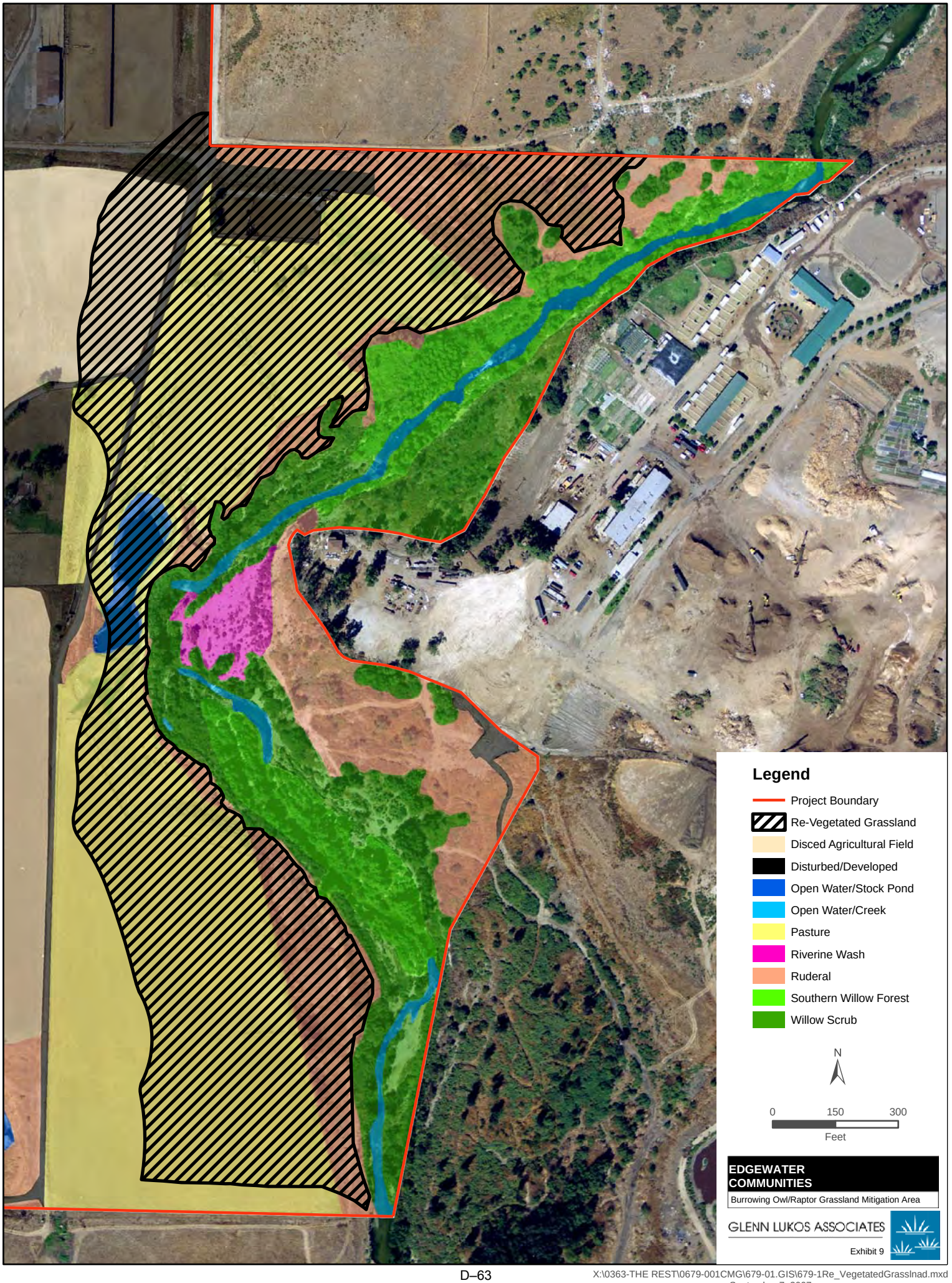

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September 7, 2007

APPENDIX A

FLORAL COMPENDIUM

AMARANTHACEAE	**AMARANTH FAMILY**
**Amaranthus albus*	Tumbling pigweed
APIACEAE	**SUMAC FAMILY**
**Conium maculatum*	Common poison-hemlock
ASTERACEAE	**SUNFLOWER FAMILY**
Ambrosia acanthicarpa	Sand-bur
Ambrosia psilostachya	Western ragweed
Artemisia douglasiana	California mugwort
Baccharis salicifolia	mulefat
Bidens laevis	Smooth bur-marigold
**Centaurea melitensis*	tocalote
**Cirsium vulgare*	Bull thistle
**Cotula australis*	Australian brass buttons
Conyza canadensis	Common horseweed
Helianthus annuus	Western sunflower
**Senecio vulgaris*	Common groundsel
Xanthium spinosum	Spiny cocklebur
BORAGINACEAE	**BORAGE FAMILY**
Heliotropum curassavicum	Alkali heliotrope
BRASSICACEAE	**MUSTARD FAMILY**
**Brassica nigra*	Black mustard
**Coronopus didymus*	Lesser wart-cress
**Hirschfeldia incana*	Summer mustard
**Lepidium latifolium*	Peppergrass
**Raphanus sativus*	Wild radish
**Rorippa nasturtium-aquaticum*	White water-cress
**Sisymbrium irio*	London rocket
CHENOPODIACEAE	**GOOSEFOOT FAMILY**
**Bassia hyssopifolia*	Five-hook bassia

Monolepis nuttalliana	Nuttall's monolepis
**Salsola tragus*	Russian thistle
CYPERACEAE	**SEDGE FAMILY**
Cyperus eragrostis	Tall umbrella sedge
Scirpus californicus	California bulrush
HYDROPHYLLACEAE	**WATERLEAF FAMILY**
Phacelia minor	Wild Canterbury-bell
JUGLANDACEAE	**WALNUT FAMILY**
Juglans californica	Southern California Black Walnut
LAMIACEAE	**MINT FAMILY**
**Marrubium vulgare*	horehound
MALVACEAE	**MALLOW FAMILY**
**Malva parviflora*	Cheeseweed
**Malva sylvestris*	High mallow
POACEAE	**GRASS FAMILY**
**Arundo donax*	Giant reed
**Avena fatua*	Wild oat
**Bromus diandrus*	Ripgut brome
**Cynodon dactylon*	Bermuda grass
**Hordeum murinum leporinum*	Foxtail barley
**Hordeum marinum spp. gussoneanum*	Mediterranean barley
**Lolium multiflorum*	Italian ryegrass
**Poa annua*	Annual bluegrass

**Sorghum halepense*	Johnson grass
POLYGONACEAE	**BUCKWHEAT FAMILY**
Polygonum lapthifolium	Willow smartweed
**Rumex crispus*	Curly dock
SALICACEAE	**WILLOW FAMILY**
Populus fremontii	Western cottonwood
Salix gooddingii	Black willow
Salix lasiolepis	Arroyo willow
SCROPHULARIACEAE	**FIGWORT FAMILY**
Mimulus guttatus	Creek monkey flower
**Veronica anagallis-aquatica*	Great water speedwell
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii	Jimsonweed
**Nicotiana glauca*	Tree tobacco
TYPHACEAE	**CAT-TAIL FAMILY**
Typha domingensis	Slender cat-tail
URTICACEAE	**NETTLE FAMILY**
Urtica dioica	Hoary nettle
**Urtica urens*	Dwarf nettle

APPENDIX B

FAUNAL COMPENDIUM

BIRDS	
PHALACROCORACIDAE	**CORMORANTS**
Phalacrocorax auritus	Double-crested cormorant
ARDEIDAE	**HERONS AND BITTERNS**
Ardea herodias	Great blue heron
Ardea alba	Great egret
Butorides virescens	Green heron
Egretta thula	Snowy egret
Nycticorax nycticorax	Black-crowned night-heron
THRESKIORNITHIDAE	**IBISES**
Plegadis chihi	White-faced ibis
ANATIDAE	**SWANS, GEESE & DUCKS**
Anas cyanoptera	Cinnamon teal
Dendrocygna autumnalis	Black-bellied whistling duck
Anas platyrhynchos	mallard
SCOLOPACIDAE	**SANDPIPERS**
Tringa melanoleuca	Greater yellowlegs
Calidris minutilla	Least sandpiper
RECURVIROSTRIDAE	**AVOCETS & STILTS**
Himantopus mexicanus	Black-necked stilt
Recurvirostra americana	American avocet
CATHARTIDAE	**NEW WORLD VULTURE**
Cathartes aura	Turkey vulture

ACCIPITRIDAE	**HAWKS**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
Elanus leucurus	White-tailed Kite
Circus cyaneus	Northern Harrier
Buteo regalis	Ferruginous Hawk
FALCONIDAE	**FALCONS**
Falco sparverius	American kestrel
Falco columbarius	Merlin
Falco mexicanus	Prairie Falcon
CHARADRIIDAE	**PLOVERS**
Charadrius vociferous	Killdeer
COLUMBIDAE	**PIGEONS & DOVES**
Columba livia	Rock pigeon
Streptopelia decaocto	Eurasian collared-dove
Zenaida macroura	Mourning dove
TYOTONIDAE	**BARN OWLS**
Tyto alba	Barn owl
STRIGIDAE	**TYPICAL OWLS**
Bubo virginianus	Great horned owl
Athene cunicularia	Burrowing owl
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's hummingbird
Archilochus alexandri	Black chinned humming bird
PICIDAE	**WOODPECKERS**
Picoides nuttallii	Nuttall's woodpecker
Picoides pubescens	Downy woodpecker

TYRANNIDAE	**TYRANT FLYCATCHERS**
Tyrannus verticalis	Western kingbird
Myiarchus cinerascens	Ash-throated flycatcher
Sayornis nigricans	Black phoebe
HIRUNDINIDAE	**SWALLOWS**
Tachycineta bicolor	Tree swallow
Stelgidopteryx serripennis	Northern rough-winged swallow
Hirundo pyrrhonota	Cliff swallow
Hirundo rustica	Barn swallow
VIREONIDAE	**VIREOS**
Vireo bellii pusillus	Least Bell's vireo
CORVIDAE	**JAYS & CROWS**
Corvus brachyrhynchos	American crow
AEGITHALIDAE	**BUSHTITS**
Psaltriparus minimus	Bushtit
TROGLODYTIDAE	**WRENS**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	House wren
MIMIDAE	**THRASHERS**
Toxostoma redivivum	California trasher
STURNIDAE	**STARLINGS**
Sturnus vulgaris	European starling
PARULIDAE	**WOOD-WARBLERS**
Geothlypis trichas	Common yellowthroat
Dendroica petechia	Yellow Warbler
Icteria virens	Yellow-breasted chat

EMBERIZIDAE	**SPARROWS & BUNTINGS**
Pipilo erythrophthalmus	Spotted towhee
Pipilo crissalis	California towhee
Melospiza melodia	Song sparrow
Passer domesticus	House sparrow
Vermivora celata	Orange-crowned warbler
CARDINALIDAE	**CARDINALS**
Guiraca caerulea	Blue grosbeak
Passerina cyanea	Indigo bunting
Pheucticus melanocephalus	Black-headed grosbeak
ICTERIDAE	**BLACKBIRDS & ORIOLES**
Agelaius phoeniceus	Red-winged blackbird
Euphagus cyanocephalus	Brewer's blackbird
Icterus cucullatus	Hooded oriole
Icterus bullockii	Bullock's oriole
Molothrus ater	Brown-headed cowbird
FRINGILLIDAE	**FINCHES**
Carpodacus mexicanus	House finch
Carduelis psaltria	Lesser goldfinch
Carduelis tristis	American goldfinch

REPTILES AND AMPHIBIANS	
IGUANIDAE	**IGUANID LIZARDS**
Sceloporus occidentalis	Western fence lizard
BUFONIDAE	**TRUE TOADS**
Bufo boreas	Western toad
HYLIDAE	**TREEFROGS**
Hyla regilla	Pacific treefrog
RANIDAE	**TRUE FROGS**
Rana catesbeiana	Bullfrog
MAMMALS	
LEPORIDAE	**HARES & RABBITS**
Sylvilagus audubonii	Audubon cottontail
SCIURIDAE	**SQUIRRELS**
Spermophilus beecheyi	California ground squirrel
CANIDAE	**WOLVES & FOXES**
Canis latrans	coyote
BOVIDAE	**CATTLE**
Bos taurus	Domestic cow

ROBERT A. HAMILTON

July 21, 2005

Debra Klepeis
Glenn Lukos Associates
29 Orchard
Lake Forest, CA 92630

SUBJECT: REPORT ON 2005 SOUTHWESTERN WILLOW FLYCATCHER SURVEYS
EDGEWATER LAKE COMMUNITIES, CHINO, SAN BERNARDINO COUNTY, CA
GLENN LUKOS ASSOCIATES PROJECT NO. 0679-1

Dear Debra,

Under the terms and conditions of my federal 10(a)1(a) permit (No. TE-799557), I have completed a series of five surveys to determine the presence or absence of the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) at the Edgewater Lake Communities project site, located along a segment of Mill Creek in Chino, western San Bernardino County, California. The surveys were completed in association with plans for a residential housing proposal on this property. This report describes the methods, and provides the results, of these directed surveys.

METHODS

I surveyed the segment of Mill Creek that passes through the project site using taped Willow Flycatcher vocalizations in order to elicit responses from any Willow Flycatchers that may have been present in the vicinity. During the course of my surveys, I also searched for Least Bell's Vireos (*Vireo bellii pusillus*), checked ponds, stock yards, and other habitats on the property, taking notes on all vertebrate species detected. Jeff Ahrens of Glenn Lukos Associates accompanied me on the 31 May survey. Table A provides basic information on the timing and weather conditions for each survey.

TABLE A: SURVEY SUMMARY

SURVEY DATE	TIME	START CONDITIONS	END CONDITIONS
31 May 2005	05:30-08:10	calm; 100% overcast; ~63°	calm; 80% overcast; ~66°F
14 June 2005	05:15-07:28	calm; tule fog; ~61°	calm; light fog; ~63°F
2 July 2005	05:05-07:52	calm; foggy; ~56°	calm; 100% overcast; ~64°F
8 July 2005	05:02-07:35	calm; light tule fog; ~64°	calm; hazy; ~74°F
17 July 2005	05:17-07:38	calm; hazy; ~63°F	calm; hazy; ~68°F

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Results

Wildlife

As specified in Table B, I detected three amphibian species, one reptile species, 62 bird species, and three mammal species on or adjacent to the property during the course of the five surveys.

Table B – Vertebrate Species Detected During Surveys

Species	7/17	7/8	7/2	6/14	5/31
Black-bellied Whistling- Duck (introduced locally)	0	0	0	4	0
Mallard (300 on 17 July mostly fly-overs)	300	4	18	30	14
Cinnamon Teal	12	7	6	4	4
Double-crested Cormorant	0	0	1	0	1
Great Blue Heron	1	3	1	4	1
Great Egret	0	1	1	2	1
Snowy Egret	0	0	0	0	2
Green Heron	1	3	0	0	0
Black-crowned Night-Heron	7	0	2	1	2
White-faced Ibis	35	0	10	3	1
Turkey Vulture	0	0	0	2	1
Cooper's Hawk	0	1	0	0	0
Red-tailed Hawk	0	2	3	2	1
American Kestrel	1	5	3	3	4
Killdeer	8	20	3	12	6
Black-necked Stilt	35	25	27	15	20
American Avocet	0	0	0	1	2
Greater Yellowlegs	0	1	0	0	0
Least Sandpiper	0	1	0	0	0
Rock Pigeon	100	50	50	30	30
Eurasian Collared-Dove	0	5	3	1	0
Mourning Dove	20	150	20	13	12
Barn Owl	2	1	0	0	0
Great Horned Owl	0	2	0	0	0
Burrowing Owl	2	8	8	1	4
Anna's Hummingbird	0	1	0	0	0
Black-chinned Hummingbird	0	0	0	1	3
Nuttall's Woodpecker	2	4	0	3	3
Downy Woodpecker	1	2	1	1	4
Ash-throated Flycatcher	1	2	1	0	0
Black Phoebe	15	18	11	9	11
Western Kingbird	0	0	0	1	6
American Crow	25	5	7	8	22
Bell's Vireo	3	3	3	1	1

SPECIES	7/17	7/8	7/2	6/14	5/31
Tree Swallow	0	0	0	0	9
Northern Rough-winged Swallow	0	0	0	1	4
Cliff Swallow	0	0	0	0	10
Barn Swallow	0	15	0	0	0
Bushtit	10	10	0	0	20
Bewick's Wren	1	3	0	0	0
House Wren	8	11	13	4	6
California Thrasher	1	0	0	2	1
European Starling	35	150	30	65	35
Orange-crowned Warbler	0	0	0	0	1
Yellow Warbler	12	18	9	9	10
Common Yellowthroat	60	75	65	33	30
Yellow-breasted Chat	5	4	6	2	3
Spotted Towhee	3	1	1	0	5
California Towhee	6	10	2	9	4
Song Sparrow	40	80	70	80	70
Black-headed Grosbeak	1	0	0	0	2
Blue Grosbeak	20	13	13	8	6
Indigo Bunting	0	0	0	0	1
Red-winged Blackbird	0	10	15	50	40
Brewer's Blackbird	3	1	2	15	20
Brown-headed Cowbird	3	7	2	0	1
Hooded Oriole	2	0	3	1	0
Bullock's Oriole	0	1	0	1	10
House Finch	20	15	15	20	20
Lesser Goldfinch	3	12	2	5	2
American Goldfinch	15	10	6	4	3
House Sparrow	1	5	5	5	2
Western Toad	0	0	0	0	1
Pacific Treefrog	0	0	0	0	√
Bullfrog	√	√	√	√	√
Western Fence Lizard	0	0	0	√	√
Audubon Cottontail	5	5	3	2	4
California Ground Squirrel	15	25	22	8	13
Coyote	0	0	0	1	0

DISCUSSION

As indicated in Table B, I did not detect any Willow Flycatchers during any of my site visits. Mill Creek was carrying a large volume of water during the surveys, and patches of willow woodland habitat along Mill Creek on the project site are well-developed, but these areas are separated by expanses of scrubby willow habitat, resulting in an area that is attractive to Least Bell's Vireos but only marginally suitable for nesting Willow Flycatchers.

I documented three territorial male Least Bell's Vireos along Mill Creek, as well as a family of Burrowing Owls in the stock yards and fields away from the creek.

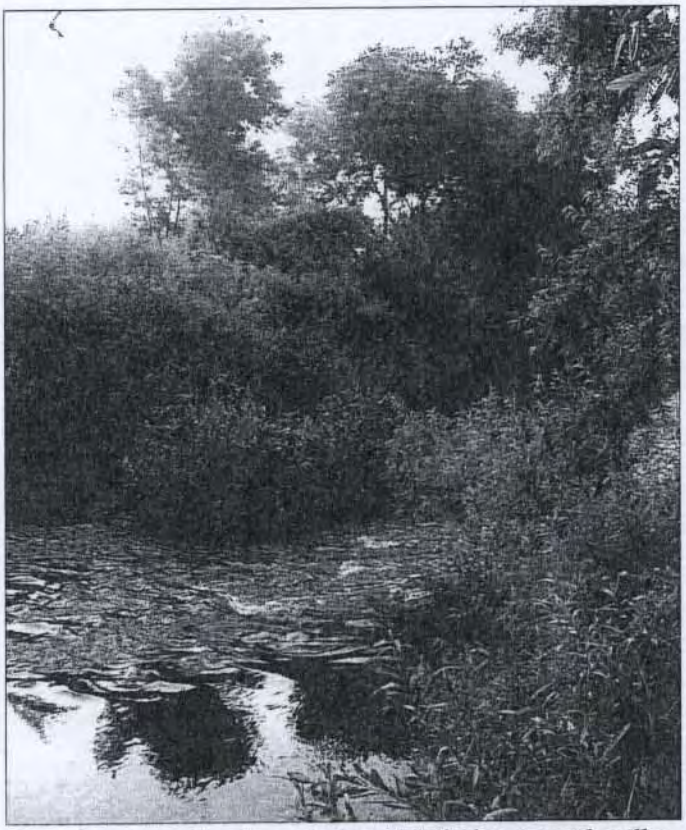
I appreciate the opportunity to provide these services. If you wish to further discuss any matters, please call me at the office (562-439-1480) or on my mobile phone (562-477-2181); you may send e-mail to robb@rahamilton.com.

Sincerely,

Robert A. Hamilton
Consulting Biologist

attachments: Site photos (one page)
Willow Flycatcher Survey & Detection Forms
Regional location map
Vicinity Map from USGS Corona North topographic quadrangle, showing locations of three male Least Bell's Vireos

Looking upstream at willow woodland in Mill Creek.



View showing wide channel of creek full of water with willow woodlands on the banks.

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Edgewater Lake Communities State CA County San Bernardino
USGS Quad Name Corona North Elevation 530-570 (feet) meters (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? ☑ *Yes* ☐ *No*

Site Coordinates: Start: N 0442628 E 3755878 UTM Datum NAD27 (NAD27 preferred)
Stop: N 0442629 E 3755149 UTM Zone 11S

***** Fill in additional site information on back of this page *****

Survey # / Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 Robert A. Hamilton, Jeff Ahrens	Date 5/31/05 Start 0530 Stop 0810 Total hrs 2.7	0	0	0	N	Y (1)	N	
2 Robert A. Hamilton	Date 6/14/05 Start 0515 Stop 0728 Total hrs 2.2	0	0	0	N	N	N	
3 Robert A. Hamilton	Date 7/12/05 Start 0505 Stop 0752 Total hrs 2.8	0	0	0	N	Y (2)	N	
4 Robert A. Hamilton	Date 7/18/05 Start 0502 Stop 0735 Total hrs 2.5	0	0	0	N	Y (7)	N	
5 Robert A. Hamilton	Date 7/17/05 Start 0517 Stop 0738 Total hrs 2.3	0	0	0	N	Y (3)	N	

Overall Site Summary (Total resident WIFLs only)	Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes (No)
Total survey hrs 12.5	–	–	–	–	If yes, report color combination(s) in the comments section on back of form

Reporting Individual Robert A. Hamilton Date Report Completed 7/17/05
US Fish and Wildlife Service Permit # TE-799557 AZ Game and Fish Department (or other state) Permit # _____

Submit original form by August 1st. Retain a copy for your records.

Fill in the following information completely. Submit original form by August 1st. Retain a copy for your records.

Reporting Individual Robert A. Hamilton Phone # 562-439-1480
Affiliation Contracting to Glenn Lukos Associates E-mail robb@rahamilton.com
Site Name Edgewater Lake Communities Date Report Completed 7-17-05

Did you verify that this site name is consistent with that used in previous years? Yes (No) (circle one)
If name is different, what name(s) was used in the past? N.A.
If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below.
Did you survey the same general area during each visit to this site this year? Yes / No If no, summarize in comments below.

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal (Private)
Name of Management Entity or Owner (e.g., Tonto National Forest) CMG Funding LLC

Length of area surveyed: 3000 ft. (specify units, e.g., miles = mi, kilometers = km, meters = m)

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

☑ Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)

☐ Mixed native and exotic plants (mostly native)

☐ Mixed native and exotic plants (mostly exotic)

☐ Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Salix gooddingii, S. lasiolepis, Baccharis salicifolia

Average height of canopy (Do not put a range): 25 feet (specify units)

Was surface water or saturated soil present at or adjacent to site? (Yes) / No (circle one)
Distance from the site to surface water or saturated soil: 0 (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes (No) (circle one)
If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

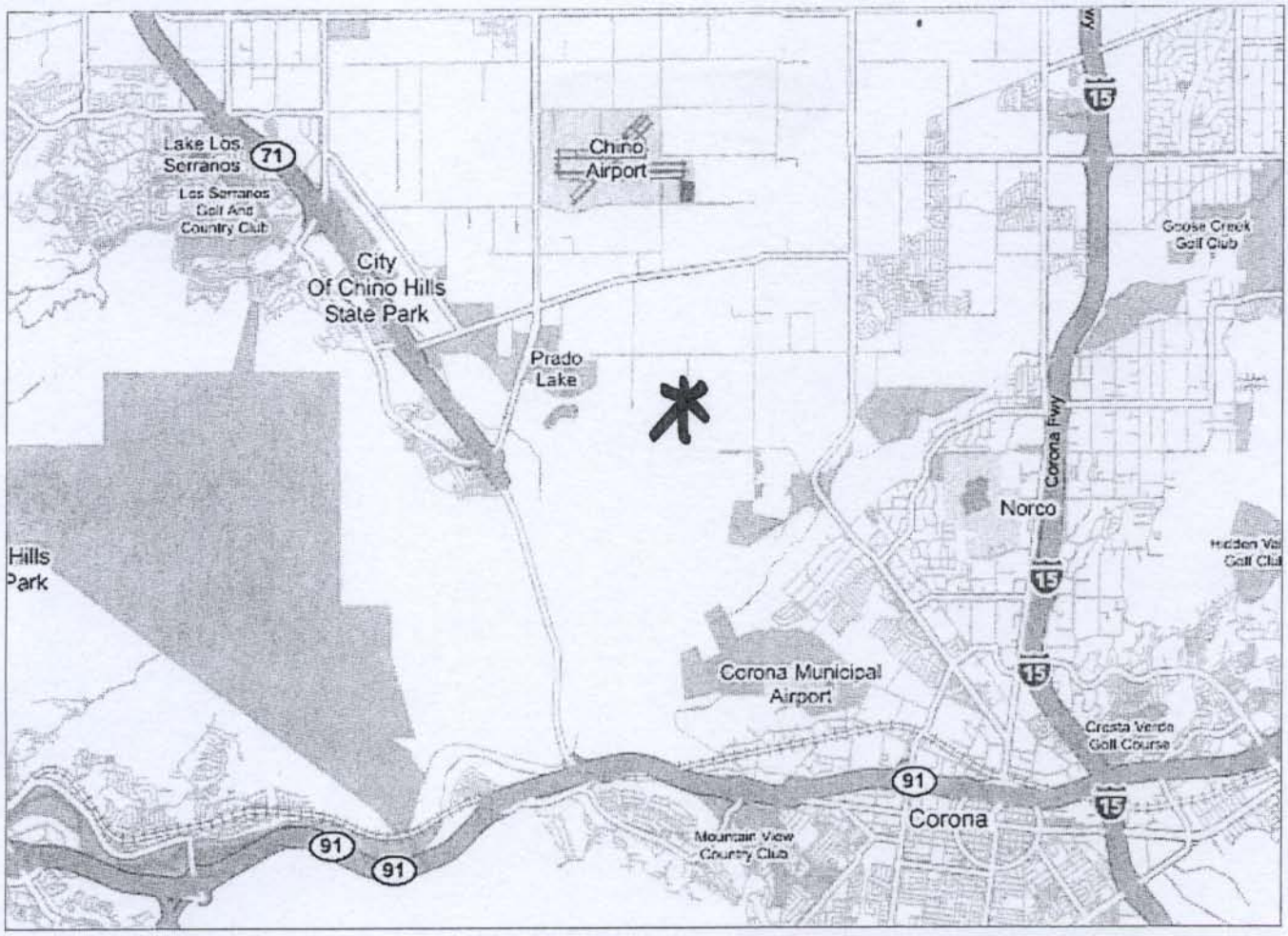
Comments (attach additional sheets if necessary)
Please see my letter report.

WIFL Detection Locations: None

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM

Google Maps BETA

To see all the details that are visible on the screen,use the "Print" link next to the map.



Regional location

* Edgewater Lake Communities Project Site

EDGEWATER LAKE COMMUNITIES

Vicinity Map

GLENN LUKOS ASSOCIATES

Adapted from USGS quadrangle (Corona North)

NORTH

0 1000 2000 3000 FEET

D.2 - Jurisdictional Delineation
Prepared by Glenn Lukos Associates - July 2007

GLENN LUKOS ASSOCIATES
Regulatory Services

July 18, 2007

Mr. Edward Callan
Development Manager
CMG Funding, LLC
8500 Wilshire Boulevard
Suite 917
Beverly Hills, California 90211

SUBJECT: Jurisdictional Delineation of the Edgewater Lake Communities Property, a 272-Acre Property in the City of Chino, San Bernardino County, California.

Dear Mr. Callan:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) jurisdiction for the above-referenced property.[1] The Edgewater Lake Communities Property (Project) is located in Township 3 South Range 7 West, Section 4 and 5 of the USGS 7.5' Quadrangles for Corona North [dated 1967, photorevised 1981] and Prado Dam [dated 1967, photorevised 1981] [Exhibit 1 – Regional Map]. The Project comprises approximately 272 acres and contains one blue-line drainage, Mill Creek [Exhibit 2]. Per the client's request, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the project site to determine the limits of CDFG jurisdiction along the western boundary of Mill Creek pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. The limits of Corps jurisdiction were evaluated; however, because they are within the CDFG limits, and outside of any potential impact limits the boundaries are not depicted on the delineation map [Exhibit 3]. Additionally, several stock ponds for containment and treatment of dairy wastewater associated with the site were evaluated and none were determined to be subject to CDFG/Corps jurisdiction. Enclosed is a 200-scale map [Exhibit 3], which depicts the jurisdictional line along Mill Creek. Photographs to document the topography, vegetative communities, and areas evaluated for CDFG and Corps jurisdiction are provided as Exhibit 4.

[1] This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

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Corps jurisdiction at the site is limited to Mill Creek. Jurisdictional wetlands are found within and adjacent to the Ordinary High Water Mark (OHWM) of the creek. The project, as currently proposed, would not impact Corps jurisdiction, including wetlands.

CDFG jurisdiction associated with the Project site is limited to Mill Creek. The project, as currently proposed, would not impact any CDFG jurisdiction, including vegetated riparian habitat, associated with the Project site.

I. METHODOLOGY

Prior to beginning the field delineation a 200-scale color aerial photograph, a 200-scale topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps/CDFG jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual[2] (Wetland Manual) and the 2006 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement).[3]. While in the field the limits of CDFG jurisdiction were recorded onto a 200-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

The Soil Conservation Service (SCS)[4] has mapped the following soil types as occurring in the general vicinity of the project site:

Chualar clay loam, 0 to 2 Percent Slopes (CkA); Chualar clay loam, 2 to 9 Percent Slopes (CkC); and Chualar clay loam, 9 to 15 Percent Slopes (CkD)

The Chualar series consists of well-drained soils. These soils are formed on alluvial fans and terraces in mixed, moderately fine textured alluvium. The vegetation commonly associated with Chualar soils includes annual grasses and forbs. Chualar soils are used for irrigated small grains,

[2] Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

[3] U.S. Army Corps of Engineers. 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement. Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

[4] SCS is now known as the National Resource Conservation Service or NRCS.

pasture plants, alfalfa, and silage. Some areas are used for dryfarmed small grains and pasture plants.

Grangeville fine sandy loam (Gr)

The Grangeville series consists of somewhat poorly drained soils. These soils are formed on slopes of alluvial fans in moderately coarse textured granitic alluvium. The vegetation commonly associated with Grangeville soils includes annual grasses and forbs and scattered cottonwood trees. Grangeville soils are used for irrigated alfalfa, small grain and pasture plants.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States[5], or in the local hydric soils list for San Bernardino. However, all four soil types contain some unnamed soil inclusions that are hydric. The Chualar Clay Loam, 0 to 2 Percent Slopes (CkA) soil contain hydric swales that have a frequently occurring water table at less than 1.5 feet from the surface for a significant period (usually more than 2 weeks) during the growing season if permeability is less than 6.0 in/hour in any layer within 20 inches. The Chualar Clay Loam 2 to 9 Percent Slopes (CkC) soils also contain hydric drainageways that have a frequently occurring water table at less than 1.5 feet from the surface for a significant period (usually more than 2 weeks) during the growing season if permeability is less than 6.0 in/hour in any layer within 20 inches, or have soils that are frequently flooded for long duration or very long duration during the growing season. The Chualar Clay Loam, 9 to 15 Percent Slopes (CkD) soil contains hydric drainage ways that have soils that are frequently flooded for long duration or very long duration during the growing season. The Grangeville Fine Sandy Loam (Gr) soil contains hydric depressions that have a frequently occurring water table at less than 1.5 feet from the surface for a significant period (usually more than 2 weeks) during the growing season if permeability is less than 6.0 in/hour in any layer within 20 inches, or have soils that are frequently flooded for long duration or very long duration during the growing season.

It is important to note that none of the hydric soil inclusions occur within the development boundary. More importantly, under the new Arid West Supplement, the presence of mapped hydric soils is no longer considered as an indicator of the presence of hydric soils, independent of onsite confirmation. As noted above, because any potential wetlands are outside of potential impact areas, no soil pits were excavated.

[5] United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

II. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
> *(2) All interstate waters including interstate wetlands;*
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
> *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
> *(ii) From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
> *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce...*
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
> *(5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
> *(6) The territorial seas;*
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*
>
> *Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.*
>
> *(8) Waters of the United States do not include prior converted cropland.*[6] *Notwithstanding the determination of an area's status as prior converted cropland by*

[6] The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water

> *any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the 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 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.*

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc*.) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The SWANCC opinion goes on to state:

---

from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season…." [Emphasis added.]

> *In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.*

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPMs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form* included as Appendix A.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps. The information pertaining to isolated waters is also included on the *Approved Jurisdictional Determination Form* included as Appendix A.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

3. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) 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...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries followed by the Arid West Supplement in 2006.

The methodology set forth in the 1987 Wetland Delineation Manual and Arid West Supplement generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands[7]);

- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and

- hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year.

B. Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.[8] The memorandum states:

> *California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required…*
>
> *The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states….*

[7] Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

[8] Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

> *Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification….*

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

> *"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.*

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge

requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

C. California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...

- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFG] as natural waterways...

- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFG jurisdictional limits closely mirror those of the Corps. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

III. RESULTS

A. Existing Conditions

Several bodies of water, including portions of Mill Creek and man-made ponds used for agricultural purposes, are located within the project site. While the agricultural ponds are within the footprint of the proposed development, Mill Creek and associated CDFG jurisdictional riparian habitat is completely avoided by the proposed development.

Mill Creek

A section of Mill Creek is located within and roughly coincident with the eastern boundary of the project site. Mill Creek is a perennial creek supported by urban and agricultural runoff and would be considered an RPW tributary to a TNW (the Pacific Ocean via the Santa Ana River). As such, Mill Creek would be subject to Corps jurisdiction in accordance with the guidance provided by the Corps relative to Rapanos. The channel has a substrate of cobbles and silt, and large areas of riparian vegetation and wetlands. The banks are steep and the creek is incised to roughly five to ten feet below the upland portion of the project site. Woody riparian vegetation associated with Mill Creek includes arroyo willow (*Salix lasiolepis*), black willow (*Salix goodingii*), and scattered cottonwood (*Populus fremontii*). Dominant understory vegetation includes mulefat (*Baccharis salicifolia*), tree tobacco (*Nicotiana glauca*), sweet clover (*Melilotus albus*), horseweed (*Conyza canadensis*), and willow smartweed (*Polygonum lapathifolium*). Other understory species include giant reed (*Arundo donax*), sunflower (*Helianthus annuus*), and sandbur (*Ambrosia acanthicarpa*). Exhibit 4, Photographs 1 and 2 depict typical conditions associated with Mill Creek.

Agricultural Ponds

A network of man-made agricultural ponds/settling basins is located in the northern section of the property in close proximity to the existing stock pens. These agricultural ponds receive wastewater from the cattle operations and are located in the central and south-central portions of the property. None of man-made agricultural ponds were included in the delineation, as they were excavated and/or diked in upland areas solely for the purpose of containing and treating agricultural waste, stock watering, or irrigation. The ponds have been constructed so that they are hydrologically isolated from Mill Creek and Chino Creek. The three most prominent ponds are described in more detail below (designated East-Central Pond, South-East Pond and South-West Pond). Impacts to the man-made ponds do not require authorization from the Corps, CDFG, or the Regional Board.

East-Central Pond
This feature is located immediately west of Mill Creek near the eastern boundary of the site [see Exhibit 4, Photograph 3]. A substantial berm, approximately 15 feet wide and five feet in height separates this pond from Mill Creek. The pond is generally unvegetated and is subject to maintenance that includes removal of emergent vegetation such as cattails and bulrush.

Immediately north of this agricultural pond is an area that is best characterized as a "head cut" or erosional feature that is connected to Mill Creek [see Exhibit 4, Photograph 4]. This feature does not exhibit any signs of flow and does not exhibit an OHWM. Furthermore, there is very limited watershed that could contribute to this feature. Given the lack of any signs of flow, this feature would not be considered a stream by CDFG or a Water of the United States by the Corps.

South-East Pond
This feature is located west of Mill Creek on an elevated terrace near the southeast corner of the site [see Exhibit 4]. This feature was created by excavating and diking and upland area and does not exhibit any areas of outflow to either Mill Creek to the east or Chino Creek to the south [see Exhibit 4, Photographs 5 and 6]. This pond receives regular input of water, which is pumped into this feature. The pond is generally unvegetated and is subject to maintenance that includes removal of emergent vegetation such as cattails and bulrush.

South-West Pond
This ephemeral feature is located west of Mill Creek on an elevated terrace near the southeast corner of the site [see Exhibit 4, Photographs 7 and 8]. This feature created by diking an upland area and typically only receives runoff from rainfall. This pond does have an out-flow pipe near the top of the berm that would allow water to overflow during large storm events to the adjacent field; however, there is no direct connection to either Mill Creek to the east or Chino Creek to the south. The pond is generally unvegetated and is subject to maintenance that includes removal of emergent vegetation such as cattails and bulrush.

B. Corps Jurisdiction

Waters of the U.S., including wetlands, subject to the jurisdiction of the Army Corps of Engineers are limited to the segment of Mill Creek (an RPW tributary to a TNW) on the eastern boundary of the project site. Mill Creek is within the property boundary but is outside of the development footprint and will be fully avoided by the proposed project. Nuisance flows from

the proposed project will be routed into bioswales with discharge points outside of Corps jurisdiction.

Agricultural ponds, such as those described above, are generally not subject to Corps jurisdiction as set forth in the Preamble to CFR 323.3:

> *For clarification it should be noted that we generally do not consider the following waters to be "Waters of the United States." However, the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories of waters is a water of the United States. EPA also has the right to determine on a case-by-case basis if any of these waters is a "water of the United States."*
>
> *(a) Non-tidal drainage and irrigation ditches excavated on dry land.*
> *(b) Artificially irrigated areas which would revert to upland if the irrigation ceased.*
> *(c) Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used for such purposes as stock watering, irrigation, settling basins or rice growing.* [Emphasis added]

The recent Rapanos guidance relative to isolated waters does not apply to these features because they are already excluded from Section 404 jurisdiction as features that the Corps does not regulate.

C. Regional Water Quality Control Board Jurisdiction

There are no waters within the project impact area that are subject to the jurisdiction of the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. Nuisance flows from the proposed project will be routed into bioswales with discharge points outside of Corps and CDFG jurisdiction. The proposed project impacts will not require authorization from the Regional Board.

D. CDFG Jurisdiction

There is no CDFG jurisdiction, including vegetated riparian habitat, associated with the proposed project footprint impact area. CDFG jurisdiction, including vegetated riparian habitat, associated with the Project Site, is limited to the section of Mill Creek that is coincident with the eastern property boundary. It should be noted that there are a few stands of willow forest and willow scrub adjacent to the creek that are not directly associated with the creek [i.e. the trunks are growing from the upland area above the bank]. These areas should not be subject to CDFG jurisdiction. The boundary of CDFG jurisdiction adjacent to the proposed project site is depicted

on the enclosed delineation map, and will be fully avoided by the proposed project. Nuisance flows from the proposed project will be routed into bioswales with discharge points outside of Corps jurisdiction [Exhibit 3].

IV. DISCUSSION

Impact Analysis

Provided that the grading plan is pulled back from the delineated edge of Mill Creek, and that all nuisance flows from the proposed project will be routed into bioswales with discharge points outside of Corps and CDFG jurisdiction, the proposed project will fully avoids impacts to all Corps, CDFG, and Regional Board jurisdiction associated with Mill Creek.

If you have any questions about this letter report, please contact Darlene Kuhn me at (949) 837-0404 ext. 24 or me at ext. 41..

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

Tony Bomkamp
Regulatory Specialist/Biologist

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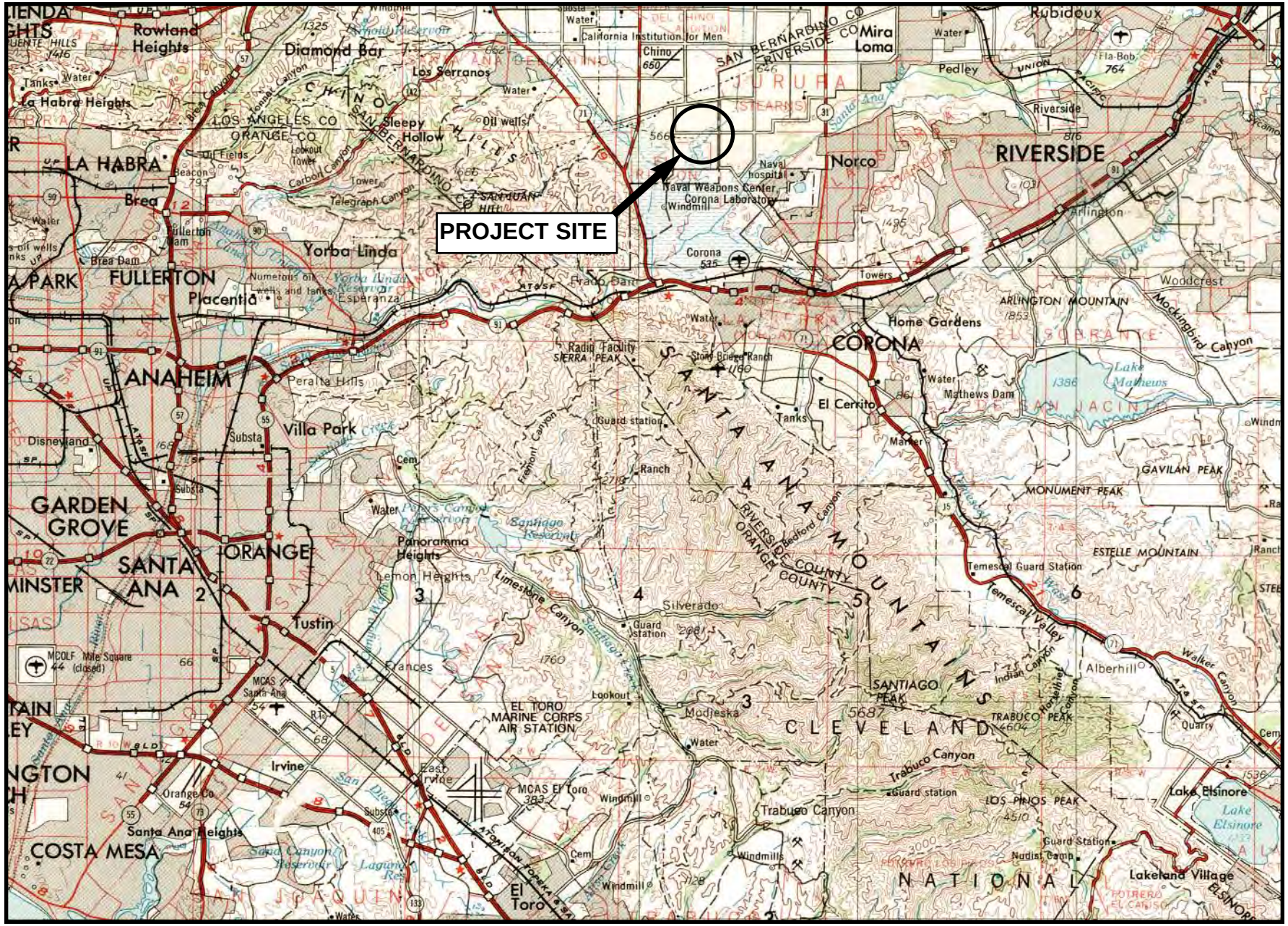
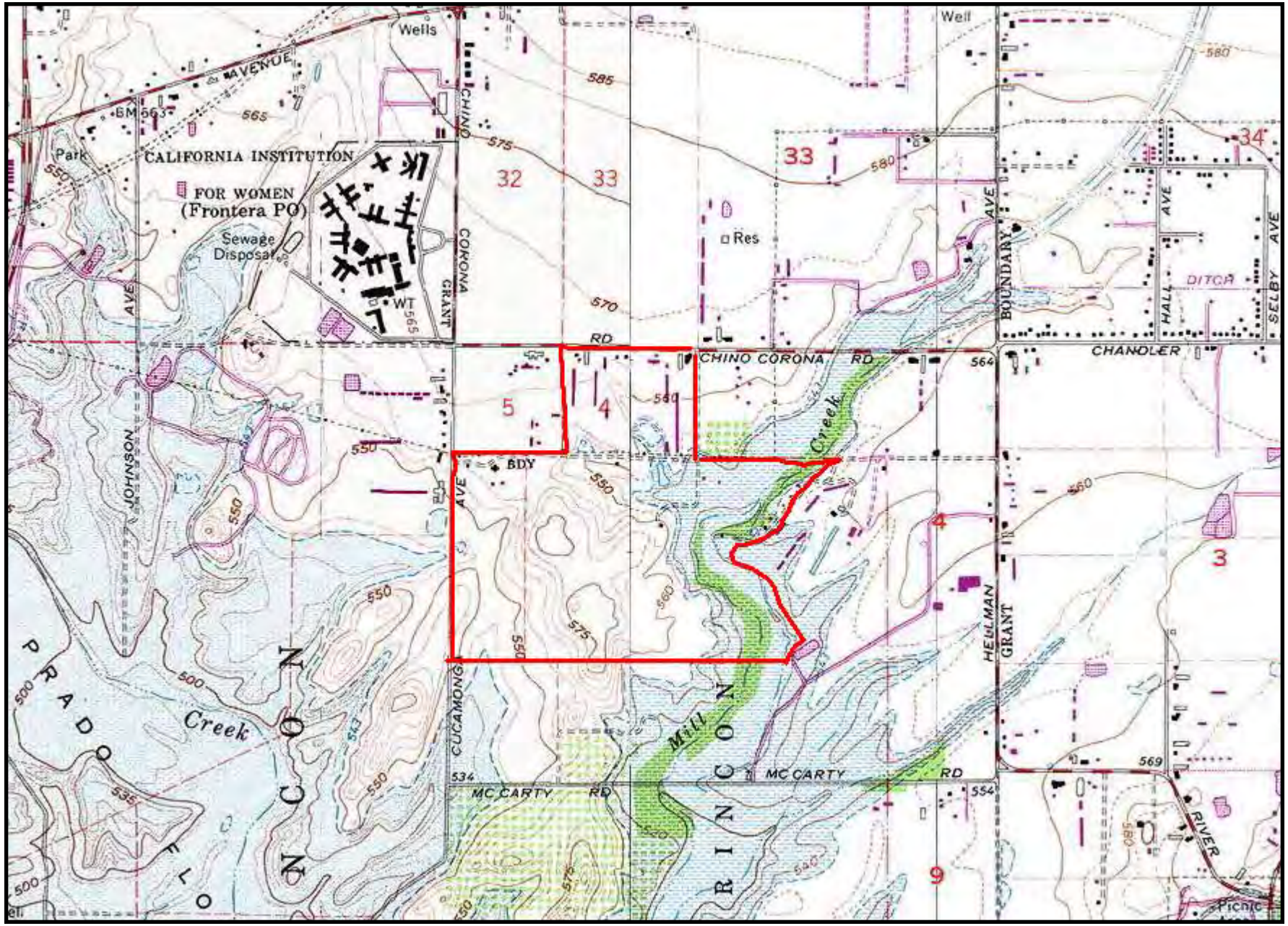


EDGEWATER COMMUNITIES

Regional Map

GLENN LUKOS ASSOCIATES

EXHIBIT 1

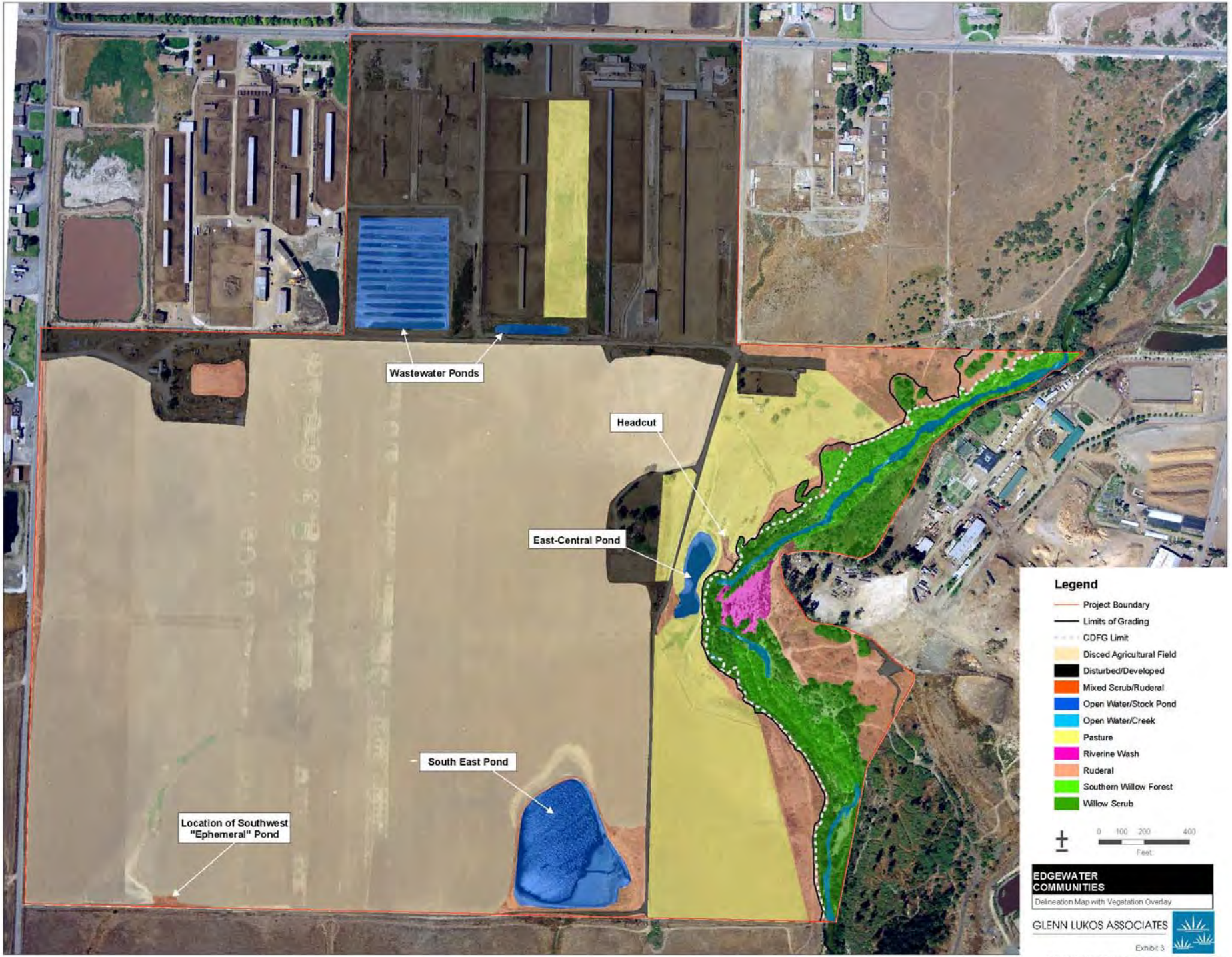


EDGEWATER COMMUNITIES

Vicinity Map

GLENN LUKOS ASSOCIATES

EXHIBIT 2


Wastewater Ponds
Headcut
East-Central Pond
South East Pond
Location of Southwest "Ephemeral" Pond
Legend
Project Boundary
Limits of Grading
CDFG Limit
Disced Agricultural Field
Disturbed/Developed
Mixed Scrub/Ruderal
Open Water/Stock Pond
Open Water/Creek
Pasture
Riverine Wash
Ruderal
Southern Willow Forest
Willow Scrub
0 100 200 400
Feet
EDGEWATER COMMUNITIES
Delineation Map with Vegetation Overlay
GLENN LUKOS ASSOCIATES
Exhibit 3

PHOTOGRAPH 1. East-facing view of Mill Creek, which will be completely avoided by the proposed project.

PHOTOGRAPH 2. East-facing view of Southern Willow Scrub associated with Mill Creek, which will be completely avoided by the proposed project.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

EDGEWATER COMMUNITIES

Site Photographs

PHOTOGRAPH 3: Agricultural pond created by excavating and/or diking dry land. Note prominent berm that seperates agricultural pond from Mill Creeek and maintains hydrologic seperation. Pond is maintained and generally supports little or no vegetation as shown.

PHOTOGRAPH 4: View of upper portion head-cut. Note lack of riparian vegetation and lack of indicators of flowing water.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

EDGEWATER COMMUNITIES

Site Photographs

PHOTOGRAPH 5: Agricultural pond created by excavating and/or diking dry land. Note prominent berm that seperates agricultural pond from Mill or Chino Creek and maintains hydrologic seperation. Pond is maintained and generally supports little or no vegetation as shown.

PHOTOGRAPH 6: View of berm construced to create pond shown in above photo . Note lack of outlet that would allow water to reach Mill or Chino Creeks.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

EDGEWATER COMMUNITIES

Site Photographs

PHOTOGRAPH 7: Agricultural pond created by diking dry land. Note prominent berm that seperates agricultural pond from Chino Creek and maintains hydrologic seperation. Pond is maintained and generally supports little or no vegetation as shown. Outlet pipe to berm can be seen near top of berm (next to plastic).

PHOTOGRAPH 8: View of berm with overflow pipe.

GLENN LUKOS ASSOCIATES

EXHIBIT 4

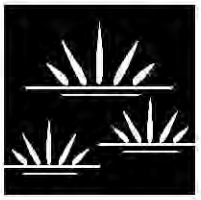
EDGEWATER COMMUNITIES

Site Photographs

D.3 - Memorandums Addressing Basin Revegetation Prepared by Glenn Lukos Associates - 2008

MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services



PROJECT NUMBER: 06790002EDGE

TO: Ed Callan
Don Rosier

FROM: Tony Bomkamp

DATE: January 29, 2008

SUBJECT: Proposed Revegetation Program the Proposed Lakes Associated with the Edgewater Project, Chino, California

---

The Edgewater Project includes construction of a series of lakes within the project that will provide for active and passive recreation opportunities as well as the opportunity to create native wetland and riparian habitats along the lake edges. Creation of the habitat would provide for expansion of important riparian habitat within the Prado Basin/Santa Ana River environs which has been determined by U.S. Fish and Wildlife Service to be important in the continued recovery of the state and federally listed least Bell's vireo (*Vireo bellii pusillus*), which has also been proposed for down listing from endangered to threatened pursuant to the federal Endangered Species Act. [1]

Two types of habitat are proposed for the approximate 2.1 acres of created lake edges as depicted on the attached exhibit, including emergent marsh for Lake 1 and Southern Willow Forest along portions of Lakes 4 and 5. The emergent marsh would be created within a narrow 10- to 15-foot shelf along the edge of Lake 1 and the plant palette is provided in Table 1 below. The emergent marsh and associated open water would provide habitat for a variety of avian species including egrets and herons such as great blue heron (*Ardea herodias*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), green heron (*Butorides virescens*) and black-crowned night heron (*Nycticorax nycticorax),* waterfowl/water birds including ducks such as mallard (*Anas platyrhynchos*), gadwall (*Anas strepera*), American wigeon (*Anas americana*), Cinnamon teal (*Anas cyanoptera*), ruddy duck (*Oxyura jamaicensis*), redhead (*Aythya americana*), canvasback (*Aythya valisineria*); water birds such as pied-bill grebe (*Podilymbus podiceps*), eared grebe (*Podiceps nigricollis*), horned grebe (*Podiceps auritus*), American coot (*Fulica americana*), and common moorhen (*Gallinula chloropus*). Passerines expected to use the emergent marsh would include marsh wren (*Cistothorus palustris*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and red-winged blackbirds (*Agelaius phoeniceus*). Swallows such as the cliff swallow (*Petrochelidon pyrrhonota*), northern rough-winged swallow (*Stelgidopteryx*

[1] U.S. Fish and Wildlife Service. 2006. Least Bell's Vireo (*Vireo bellii pusillus*) 5-year Review Summary and Evaluation, Carlsbad, California. September 2006.

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serripennis), and barn swallow (*Hirundo rustica*) would be expected to forage over the marsh and open water.

The Southern Willow Forest would be planted along the lake edges and would vary in width from 30- to 100-feet, intergrading into other natural habitats restored in the open space between Mill Creek and the revegetated lake edges. The willow forest will be created with structure that is optimal for least Bell's vireo and other special-status riparian birds such as yellow-breasted chat and yellow warbler, see plant pallet in Table 2 below. The habitat would be structured with a canopy of willows including black willow (*Salix nigra*), arroyo willow (*Salix lasiolepis*), and occasional black cottonwoods (*Populus balsamifera tremuloides*). The complex understory would include layers of narrow-leaf willow (*Salix exigua*) and mulefat (*Baccharis salicifolia*) with additional layers of blackberry (*Rubus ursinus*), California rose (*Rosa californica*), and mugwort (*Artemisia douglasiana*).

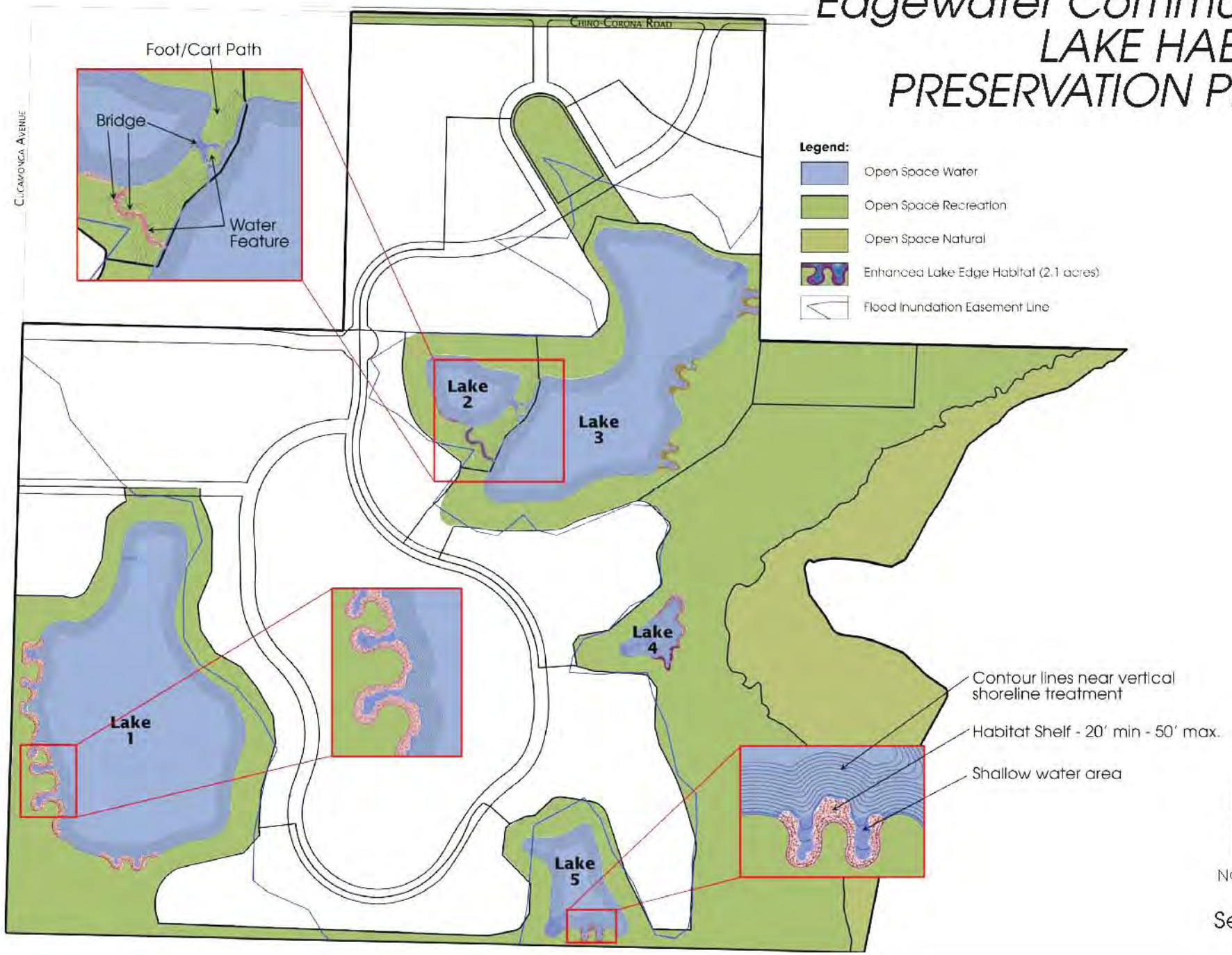
In addition to providing habitat for least Bell's vireo and other special-status species, the willow riparian habitat would provide important habitat for a wide range of breeding and migratory species of woodpeckers, warblers, vireos, sparrows and a variety of songbirds.

TABLE 1
EMERGENT MARSH

Botanic Name	Common Name	Stock Type	Plant Spacing	No. per Acre	Percent	Total Plant Qty.
Emergent Marsh						
Anemopsis californica	Yerba mansa	Liner	2' o.c.	200		
Eleocharis macrostachya	Spikerush	1 gal	4' o.c.	200		
Epilobium ciliatum	Willow-herb	Liner	2' o.c.	400		
Juncus rugulosus	Wrinkled rush	Liner	3' o.c.	200		
Polygonum lapathifolium	Willow knotweed	Liner	2' o.c.	350		
Urtica dioica holosericea	Stinging nettle	1 gal	3' o.c.	200		
Scirpus americanus	Olney's bulrush	1 gal	3' o.c	200		
Scirpus maritimus	Alkali bulrush	1 gal	4' o.c.	350		
Scirpus californicus	California bulrush	1 gal	3' o.c	200		
Total Container Stock						
SEED MIX				**Lbs./ Acre**	**Percent**	**Total Lbs.**
Eleocharis macrostachya	Spikerush	Seed		5		
Juncus mexicanus	Mexican rush	Seed		3		
Scirpus maritimus	Alkali bulrush	Seed		4		
Total Seed Stock						

TABLE 2 SOUTHERN WILLOW FOREST PLANT PALETTE						
Botanic Name	**Common Name**	**Stock Type**	**Plant Spacing**	**No. per Acre**	**Percent**	**Total Plant Qty.**
CANOPY						
Salix gooddingii	Black willow	1 gal	15' o.c.	150		
Salix lasiolepis	Arroyo willow	1 gal	15' o.c.	150		
Populus balsamifera ssp. trichocarpa	Black Cottonwood	1 gal	30' o.c.	50		
Sambucus mexicana	Blue elderberry	1 gal	20' o.c.	50		
Subtotal						
UNDERSTORY						
Salix exigua	Narrowleaf willow	1 gal	8' o.c.	250		
Baccharis salicifolia	Mulefat	1 gal	8' o.c.	250		
Salix exigua	Sandbar willow	1 gal	10' o.c.	200		
Artemesia douglasiana	Mugwort	Liner	4' o.c	200		
Rubus ursinus	California blackberry	1 gal	8' o.c.	100		
Rosa californica	California wild rose	1 gal.	4' o.c.	150		
Subtotal						
Total Container Stock						
SEED MIX				**Lbs./ Acre**	**Percent**	**Total Lbs.**
Muhlenbergia rigens	Deergrass	Seed		3		
Artemisia douglasiana	Mugwort	Seed		6		
Eleocharis macrostachya	Creeping spikerush	Seed		3		
Juncus mexicanus	Mexican rush	Seed		4		
Leymus triticoides	Creeping wild rye	Seed		3		
Total Seed Stock						

Edgewater Community
LAKE HABITAT PRESERVATION PLAN

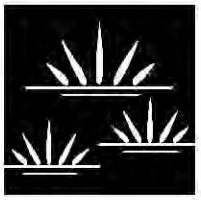


Section IV
Figure 2

Source: PBR (2008 revisions)

MEMORANDUM

GLENN LUKOS ASSOCIATES
Regulatory Services



PROJECT NUMBER: 0679-2

TO: Edward Callan

FROM: Darlene A. Shelley

DATE: February 19, 2008

SUBJECT: Edgewater Development

Glenn Lukos Associates was asked to provide a planting palette for the proposed basins for the Edgewater Development. In compliance with the Preserve Specific Plan and the existing plant palette for the Preserve retention/detention basins we have attached a copy of the hydroseed mix used by the Preserve development.

This mix provides a mixture of grasses and other plants that will provide cover for the basins while maintaining a grasslands habitat. Also attached are cross sections of the basins provided by Huitt Zollars.

Attachments: Two

0163-2b.mem.doc

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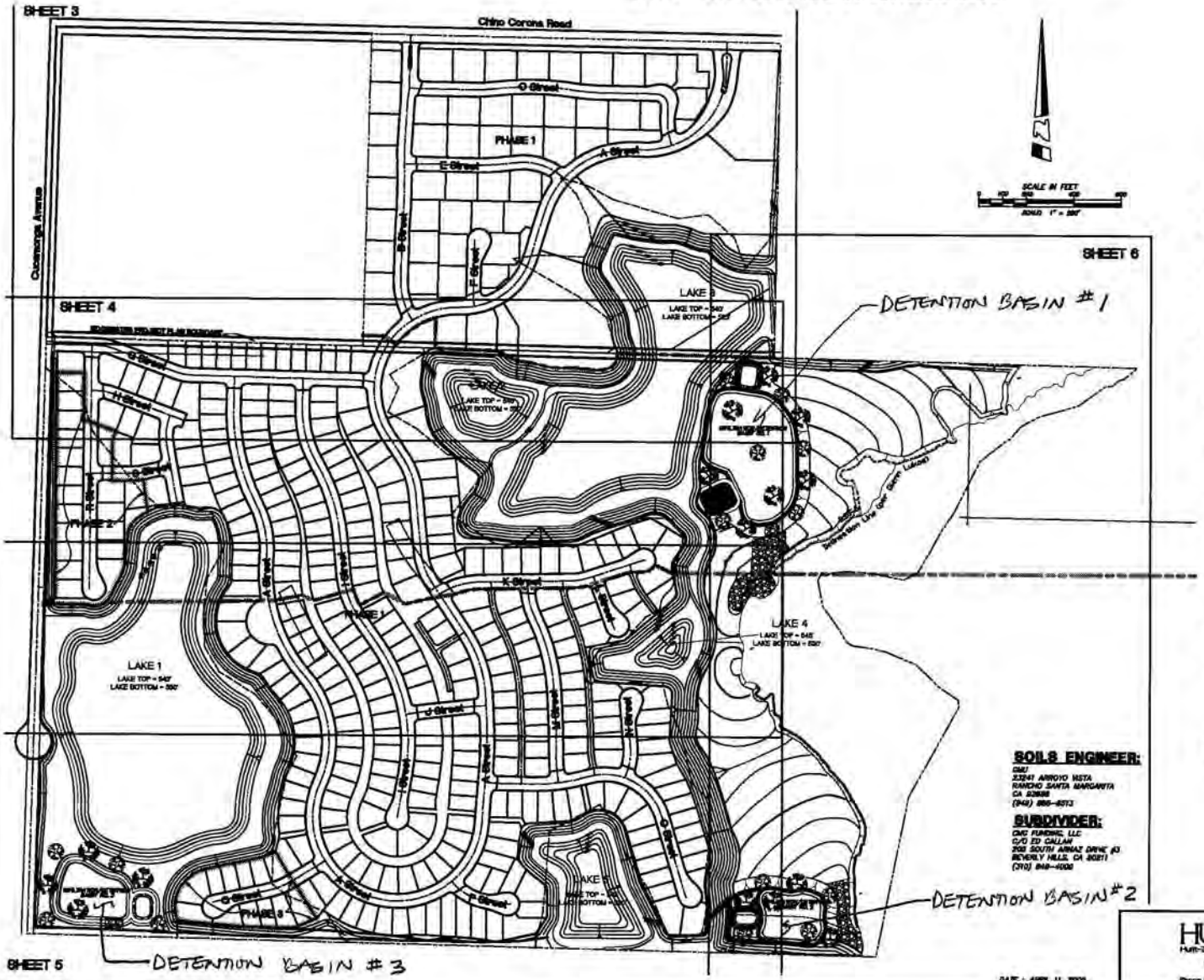
BASIN SLOPES MIX		
Species Name	**Common Name**	**Lbs/Acre**
Agrostis pallens	Bent grass	2
Camissonia cheiranthifolia	Beach primrose	3.5
Distichlis spicata	Salt grass	3.5
Eschscholzia californica	California poppy	1.5
Festuca rubra 'molate'	Red fescue	2
Gilia tricolor	Bird's eyes	1
Heliotropium curassivicum	Alkali heliotrope	3.5
Layia platyglossa	Tidy tips	1
Lotus hamatus	Bird's foot trefoil	2
Lupinus bicolor	Miniature lupine	1.5
Lupinus microcarpus densiflorus	Golden lupine	0.5
Nemophila menziesii	Baby blue eyes	1
Phacelia campanularia	California bluebells	1
Total		**24**

EDGEWATER PROJECT PLAN (APPLICANT PLAN)

IN THE CITY OF CHINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA
377 NUMBERED LOTS AND 56 LETTERED LOTS



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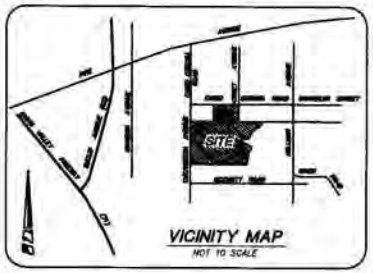
SCALE: 1" = 800'



NOTES

1) EXISTING LAND USE: AGRICULTURE.
2) PROPOSED LAND USE: RESIDENTIAL, PARK, LANDSCAPING AND STREETS.
3) EXISTING ZONING: CITY OF CHINO "SPECIFIC PLAN"
4) ADJACENT LAND: NORTH: RESIDENTIAL
SOUTH: PRADO DAM/PRADO RESERVOIR.
EAST: AGRICULTURE.
WEST: AGRICULTURE.
5) ACCESS TO SITE IS PROPOSED VIA: CHINO CORONA ROAD & CUCAMONGA AVENUE.
6) ASSESSOR'S PARCEL NUMBER: 1.33-032-037; -038, 039
7) NUMBERED LOTS = 377
LETTERED LOTS = 51
8) NUMBER OF PHASES = 3
9) PROPOSED EASEMENT FOR SLOPE & FLOOD INUNDATION FOR LOTS AH, AI & AJ

UTILITY

SEWER: CITY OF CHINO PUBLIC WORKS DEPT.
13220, CENTRAL AVENUE
CHINO, CALIFORNIA 91710
(909) 627-7577

WATER: CITY OF CHINO PUBLIC WORKS DEPT.
13220, CENTRAL AVENUE
CHINO, CALIFORNIA 91710
(909) 627-7577

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GAS: SOUTHERN CALIFORNIA GAS COMPANY
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REDLANDS, CALIFORNIA 92374-9720
(909) 335-7572 (800) 422-4133

TELEPHONE: GENERAL TELEPHONE
1400 PHILLIPS BLVD.
POMONA, CALIFORNIA 91766
(909) 469-6334 (800) 422-4133

FIRE PROTECTION: CHINO VALLEY INDEPENDENT FIRE DISTRICT
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(909) 393-3866

CABLE TELEVISION: ADELPHIA CABLEVISION
12960 DUPONT ST.
ONTARIO, CALIFORNIA 91761
(909) 481-1116 (800) 638-4770

LEGEND

C.D.F.G. - CALIFORNIA DEPARTMENT OF FISH & GAME

SOILS ENGINEER:
GMU
33241 ARROYO VISTA
RANCHO SANTA MARGARITA
CA 92688
(949) 888-6513

SUBDIVIDER:
CMC FUNDING, LLC
C/O ED CALLAN
705 SOUTH ARNAZ DRIVE #3
BEVERLY HILLS, CA 90211
(310) 848-4008

DATE : APRIL 11, 2000

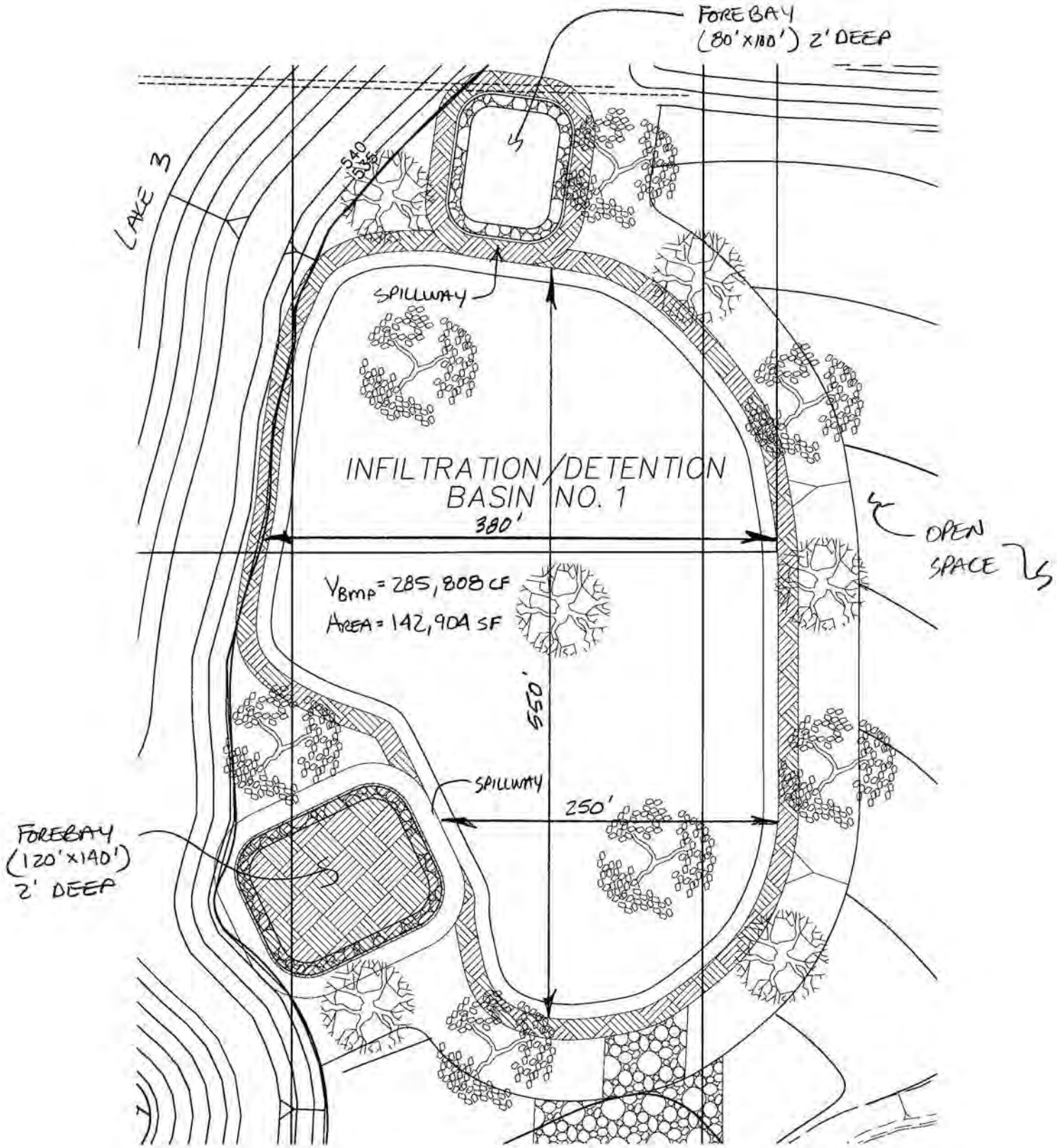
HUITT-ZOLLARS
Huitt-Zollars, Inc. Ontario
103 South Milliken Avenue, Suite D
Ontario, California 91761-8112
Phone (909) 390-8400 Fax (909) 390-8406

DESIGNED BY: RH/TB
DRAWN BY: PMP
CHECKED BY: RH

EDGEWATER PROJECT PLAN (APPLICANT PLAN)

SHEET 1 OF 7 SHEETS

JOB NO. 10-1073-04



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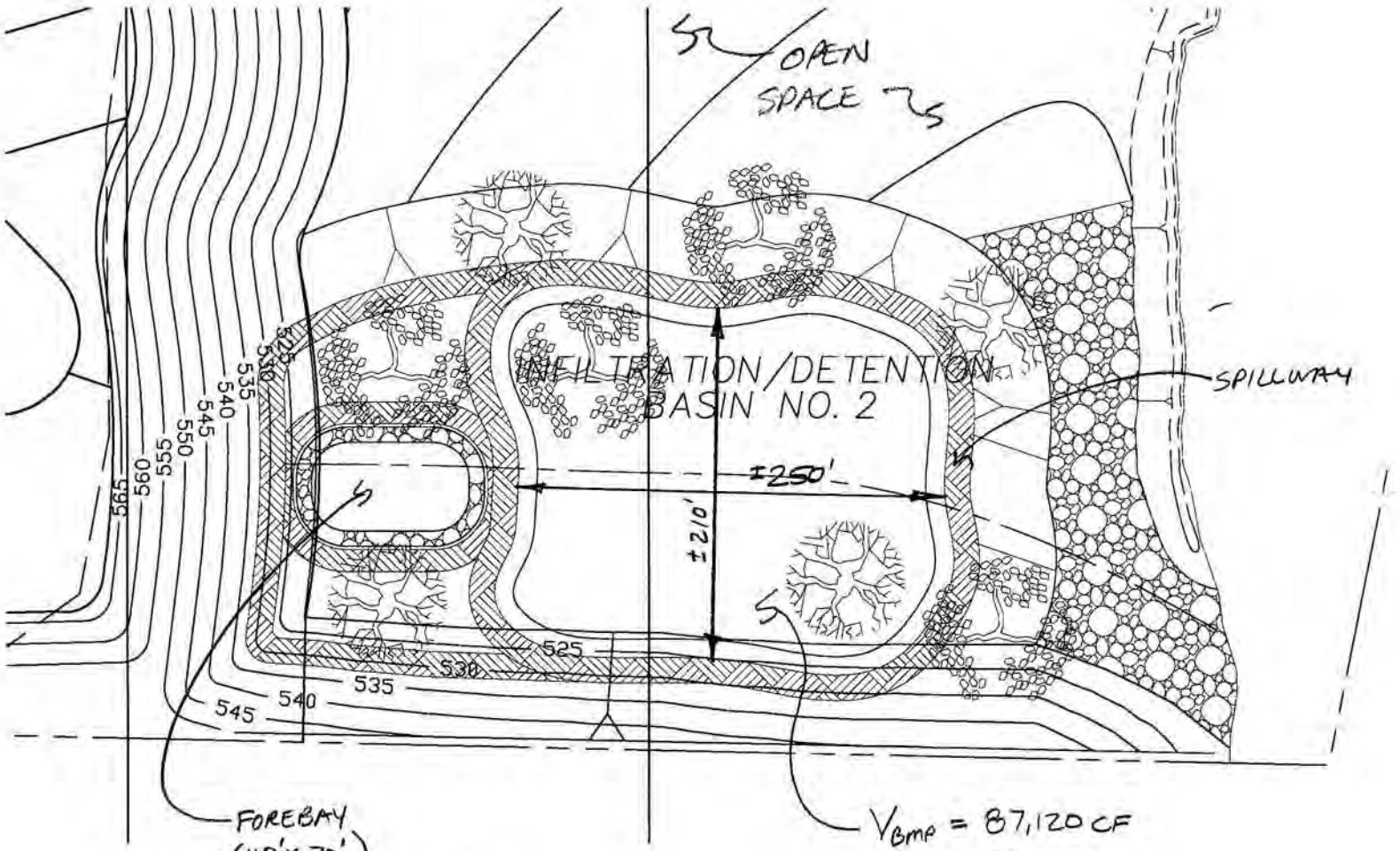
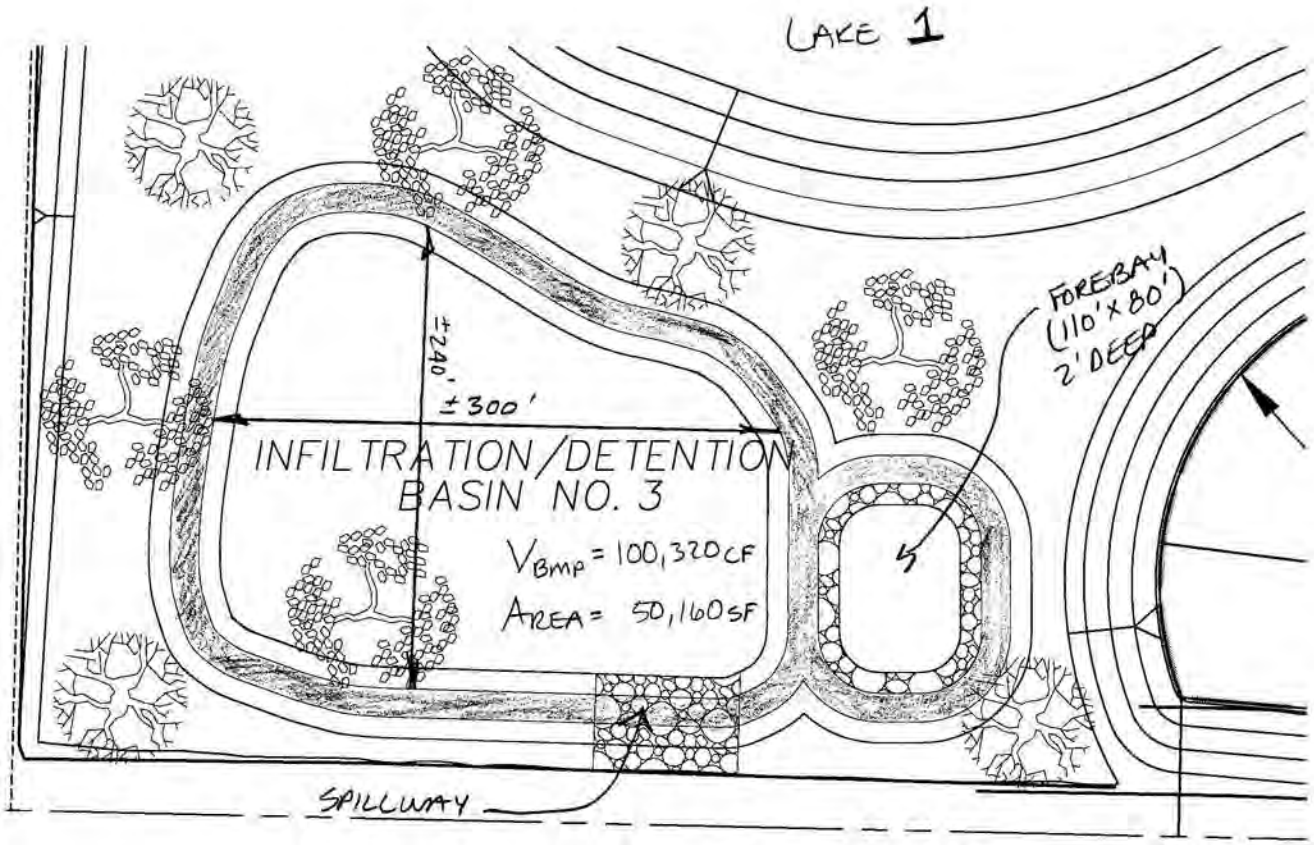

OPEN SPACE
INFILTRATION/DETENTION BASIN NO. 2
SPILLWAY
±250'
±210'
565
560
555
550
545
540
535
530
525
FOREBAY (110'X 70') 2' DEEP
V_{BMP} = 87,120 CF
AREA = 43,560 SF
V_{BMP} = VOLUME OF RUNOFF STORED IN THE DETENTION BASIN BEFORE IT IS ALLOWED TO TOP THE SPILLWAY



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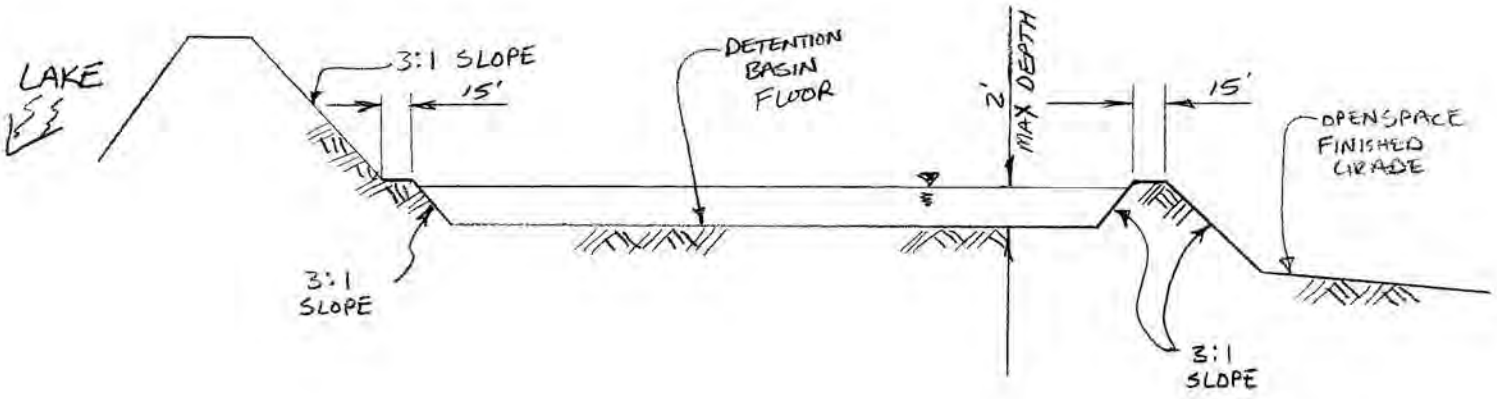


INFILTRATION / DETENTION BASIN
TYPICAL SECTION
NOT TO SCALE

D.4 - List of Invasive and Non-Native Plant Species (Table 6-2), Prepared by California Exotic Pest Plant Council US Department of Agriculture - October 1998

TABLE 6-2
PLANTS THAT SHOULD BE AVOIDED
ADJACENT TO THE MSHCP CONSERVATION AREA

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species)	acacia
Achillea millefolium	var. *millefolium* common yarrow
Ailanthus altissima	tree of heaven
Aptenia cordifolia	red apple
Arctotheca calendula	cape weed
Arctotis spp. (all species & hybrids)	African daisy
Arundo donax	giant reed or arundo grass
Asphodelus fistulosus	asphodel
Atriplex glauca	white saltbush
Atriplex semibaccata	Australian saltbush
Carex spp. (all species*)	sedge
Carpobrotus chilensis	ice plant
Carpobrotus edulis	sea fig
Centranthus ruber	red valerian
Chrysanthemum coronarium	annual chrysanthemum
Cistus ladanifer	(incl. hybrids/varieties) gum rockrose
Cortaderia jubata [*syn.C. Atacamensis*]	jubata grass, pampas grass
Cortaderia dioica [syn. *C. sellowana*]	pampas grass
Cotoneaster spp. (all species)	cotoneaster
Cynodon dactylon	(incl. hybrids varieties) Bermuda grass
Cyperus spp. (all species*)	nutsedge, umbrella plant
Cytisus spp. (all species)	broom
Delosperma 'Alba'	white trailing ice plant
Dimorphotheca spp. (all species)	African daisy, Cape marigold
Drosanthemum floribundum	rosea ice plant
Drosanthemum hispidum	purple ice plant
Eichhornia crassipes	water hyacinth
Elaegnus angustifolia	Russian olive

Eucalyptus spp. (all species)	eucalyptus or gum tree
Eupatorium coelestinum [syn. Ageratina sp.]	mist flower
Festuca arundinacea	tall fescue
Festuca rubra	creeping red fescue
Foeniculum vulgare	sweet fennel
Fraxinus uhdei	(and cultivars) evergreen ash, shamel ash
Gaura (spp.) (all species)	gaura
Gazania spp. (all species & hybrids)	gazania
Genista spp. (all species)	broom
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
Hypericum spp. (all species)	St. John's Wort
Ipomoea acuminata	Mexican morning glory
Lampranthus spectabilis	trailing ice plant
Lantana camara	common garden lantana
Lantana montevidensis [syn. *L. sellowiana*]	lantana
Limonium perezii	sea lavender
Linaria bipartita	toadflax
Lolium multiflorum	Italian ryegrass
Lolium perenne	perennial ryegrass
Lonicera japonica	(incl. ‘Halliana') Japanese honeysuckle
Lotus corniculatus	birdsfoot trefoil
Lupinus arboreus	yellow bush lupine
Lupinus texanus	Texas blue bonnets
Malephora crocea	ice plant
Malephora luteola	ice plant
Mesembryanthemum nodiflorum	little ice plant
Myoporum laetum	myoporum
Myoporum pacificum	shiny myoproum
Myoporum parvifolium	(incl. ‘Prostratum') ground cover myoporum
Oenothera berlandieri	Mexican evening primrose

Olea europea	European olive tree
Opuntia ficus-indica	Indian fig
Osteospermum spp. (all species)	trailing African daisy, African daisy,
Oxalis pes-caprae	Bermuda buttercup
Parkinsonia aculeata	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary Island date palm
Phoenix dactylifera	date palm
Plumbago auriculata	cape plumbago
Polygonum spp. (all species)	knotweed
Populus nigra 'italica	' Lombardy poplar
Prosopis spp. (all species*)	mesquite
Ricinus communis	castorbean
Robinia pseudoacacia	black locust
Rubus procerus	Himalayan blackberry
Sapium sebiferum	Chinese tallow tree
Saponaria officinalis	bouncing bet, soapwart
Schinus molle	Peruvian pepper tree, California pepper
Schinus terebinthifolius	Brazilian pepper tree
Spartium junceum	Spanish broom
Tamarix spp. (all species)	tamarisk, salt cedar
Trifolium tragiferum	strawberry clover
Tropaelolum majus	garden nasturtium
Ulex europaeus	prickly broom
Vinca major	periwinkle
Yucca gloriosa	Spanish dagger

An asterisk (*) indicates some native species of the genera exist that may be appropriate.

Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division
of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego-Department of Agriculture.

D.5 - Memorandum Addressing Basin Seed Mix, Prepared by Michael Brandman Associates - March 2008

Michael Brandman Associates

Bakersfield
661.334.2755

Fresno
559.497.0310

Irvine
714.508.4100

Palm Springs
760.322.8847

Sacramento
916.447.1100

San Bernardino
909.884.2255

San Ramon
925.830.2733

Date: March 3, 2008

To: Candida Neal, AICP

From: Mikael Romich, Project Biologist

Subject: Edgewater Communities Basin Seed Mix

The following presents Michael Brandman Associates (MBA) recommended seed mix for the proposed basins on the Edgewater Communities Project site. The proposed seed mix was selected by MBA Restoration Biologist Scott Holbrook based on availability and the potential germination rate of the seed mix. It was also evaluated to reduce erosion and provide potential water quality benefits by establishing and managing vegetation that will help control the pollutant load in runoff passing through the basin, primarily through nutrient uptake. In addition, the establishment and management of vegetation in the basin and on the perimeter slopes constitute key elements in promoting use of the basins by foraging raptors.

Attached infiltration/detention basin drawings were provided to MBA by Glenn Lukos Associates (GLA), the Applicant's biological resource consultant. Memos provided by GLA addressing basin revegetation, contained in Appendix D of the Edgewater Communities Draft EIR, were also reviewed.

Two different seed palettes have been developed by MBA for the landscape plan. One palette is appropriate for areas that will typically be dry, and the other for areas that will be occasionally to frequently wet. It is expected that the lowest portions of the basin bottom are likely to be relatively wet, at least occasionally. Therefore, low-lying areas shall be seeded with the palette designed for wet areas. This seed mix includes a variety of wetland herbs, grasses, and forbs that are suitable for relatively moist lowland habitat areas. The upper areas, including the perimeter slopes, should be seeded with the palette designed for dryer areas. This seed mix includes a variety of native grasses and wildflowers that are suitable for relatively dry upland habitat areas.

Manual broadcast seeding is the preferred method for distributing seed on the Project site. However, there are several other methods for seeding (e.g., hydroseeding, imprinting) that have been used successfully in numerous restoration projects, although results vary widely.

It is recommended that these basins be managed to provide suitable raptor foraging opportunities, which could include the instillation of several perches and vegetation management that promotes use by raptor prey items, such as California vole. In addition, to achieve the goals set for burrowing owl, the perimeter slopes of the basins need instillation of artificial burrowing owl burrows. Vegetation management could involve periodic mowing, selective thinning, and weed control to maintain suitable raptor foraging habitat throughout the basin and to maintain relatively barren zones around future burrowing owl burrow sites. The following tables and maps summarize the seed mixes and the basins included in this vegetation effort.

Table 1 below lists species selected for planting from seed throughout the basin bottom and on the perimeter slope. This seed mix includes a variety of native grasses, shrubs and wildflowers that are suitable for relatively dry upland habitat areas.

Table 1 – Dry Zone Seed Pallet

Botanical Name	Common Name (seed count per bulk pound)	Life Form	Bulk/lb/ac
Agrostis pallens	San Diego bentgrass (4.2M)	Grass	2
Amsinckia intermedia	Common fiddleneck (230K)	Herb	3
Artemisia dracunculus	Tarragon (8 M)	Herb	1
Eriophyllum confertiflorum	Golden yarrow (2.75M)	Sub-shrub	1
Eschscholzia californica	California poppy (275K)	Wildflower	2
Hemizonia fasciculata	Fascicled tarweed (900K)	Sub-shrub	1
Isocoma menziesii	Goldenbush (835K)	Sub-shrub	1
Koeleria macrantha	Junegrass (1.3M)	Grass	1
Lasthenia glabrata	Goldfields (1.8M)	Wildflower	1
Lotus scoparius	Deerweed (170K)	Sub-shrub	1
Lupinus bicolor	Pygmy-leaf lupine (75K)	Herb	4
Melica californica	California melic (300K)	Grass	2
Muhlenbergia microsperma	Littleseed muhly (2M)	Grass	2
Nassella lepida	Foothill needlegrass (415K)	Grass	2
Nassella pulchra	Purple needlegrass (110K)	Grass	4
Vulpia microstachys	Small fescue (300K)	Grass	4
Total			**32**

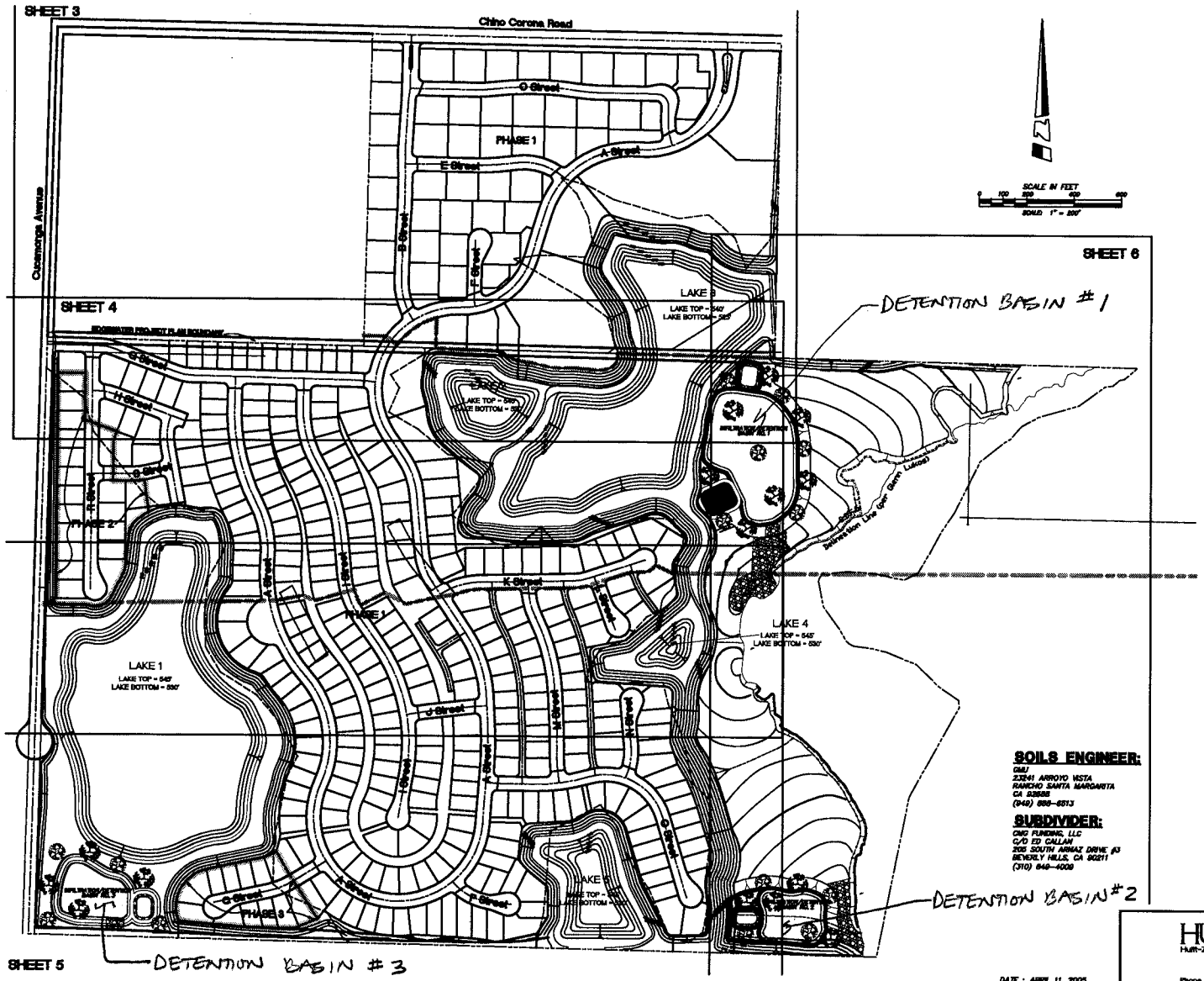
Table 2 lists the species selected for planting from seed throughout the lower portions of the basin bottom where saturated soil conditions are anticipated to occur periodically. This seed mix includes a variety of wetland herbs, grasses, and forbs that are suitable for relatively moist habitat areas.

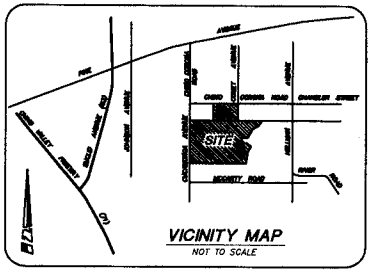
Table 2: Wet Zone Seed Pallet

Botanical Name	Common Name (seed count per bulk pound)	Life Form	Bulk/lb/ac
Anemopsis californica	Yerba mansa (1.25M)	Herb	2
Artemisia douglasiana	Mugwort (5M)	Herb	1
Artemisia dracunculus	Tarragon (8M)	Herb	1
Carex spissa.	Sawgrass sedge (380K)	Grass-like herb	3
Cyperus eragrostis	Nutsedge (4M)	Grass-like herb	2
Distichlis spicata	Salt grass (670K)	Grass	1
Eleocharis macrostachya	Common spike-rush (840K)	Grass-like herb	1
Heliotropium curassavicum	Wild heliotrope (900K)	Herb	2
Hordeum brachyantherum	Meadow barley (85K)	Grass	4
Juncus acutus	Spiny rush (9.6M)	Grass-like herb	1
Juncus bufonius	Toad rush (20M)	Grass-like herb	1
Juncus mexicanus	Mexican rush (?)	Grass-like herb	1
Lasthenia glabrata	Goldfields (1.8M)	Herb	1
Koeleria macrantha	Junegrass (1.3M)	Grass	2
Leymus triticoides	Beardless wild rye (126K)	Tall grass	2
Lupinus succulentus	Arroyo lupine (15K)	Herb	3
Rumex salicifolius	Willow dock (325K)	Herb	2
Total			**30**

EDGEWATER PROJECT PLAN (APPLICANT PLAN)

IN THE CITY OF CHINO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA
377 NUMBERED LOTS AND 56 LETTERED LOTS





NOTES

1) EXISTING LAND USE: AGRICULTURE.
2) PROPOSED LAND USE: RESIDENTIAL, PARK, LANDSCAPING AND STREETS.
3) EXISTING ZONING: CITY OF CHINO "SPECIFIC PLAN"
4) ADJACENT LAND:
   NORTH: RESIDENTIAL.
   SOUTH: PRADO BASIN RESERVOIR.
   EAST: AGRICULTURE.
   WEST: AGRICULTURE.
5) ACCESS TO SITE IS PROPOSED VIA: CHINO CORONA ROAD & CUCAMONGA AVENUE.
6) ASSESSOR'S PARCEL NUMBER: 132-002-037, -038, 039
7) NUMBERED LOTS - 377
   LETTERED LOTS - 51
8) NUMBER OF PHASES - 3
9) PROPOSED EASEMENT FOR SLOPE & FLOOD INUNDATION FOR LOTS AH, AI & AJ

UTILITY

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LEGEND

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SOILS ENGINEER:

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DATE : APRIL 11, 2005

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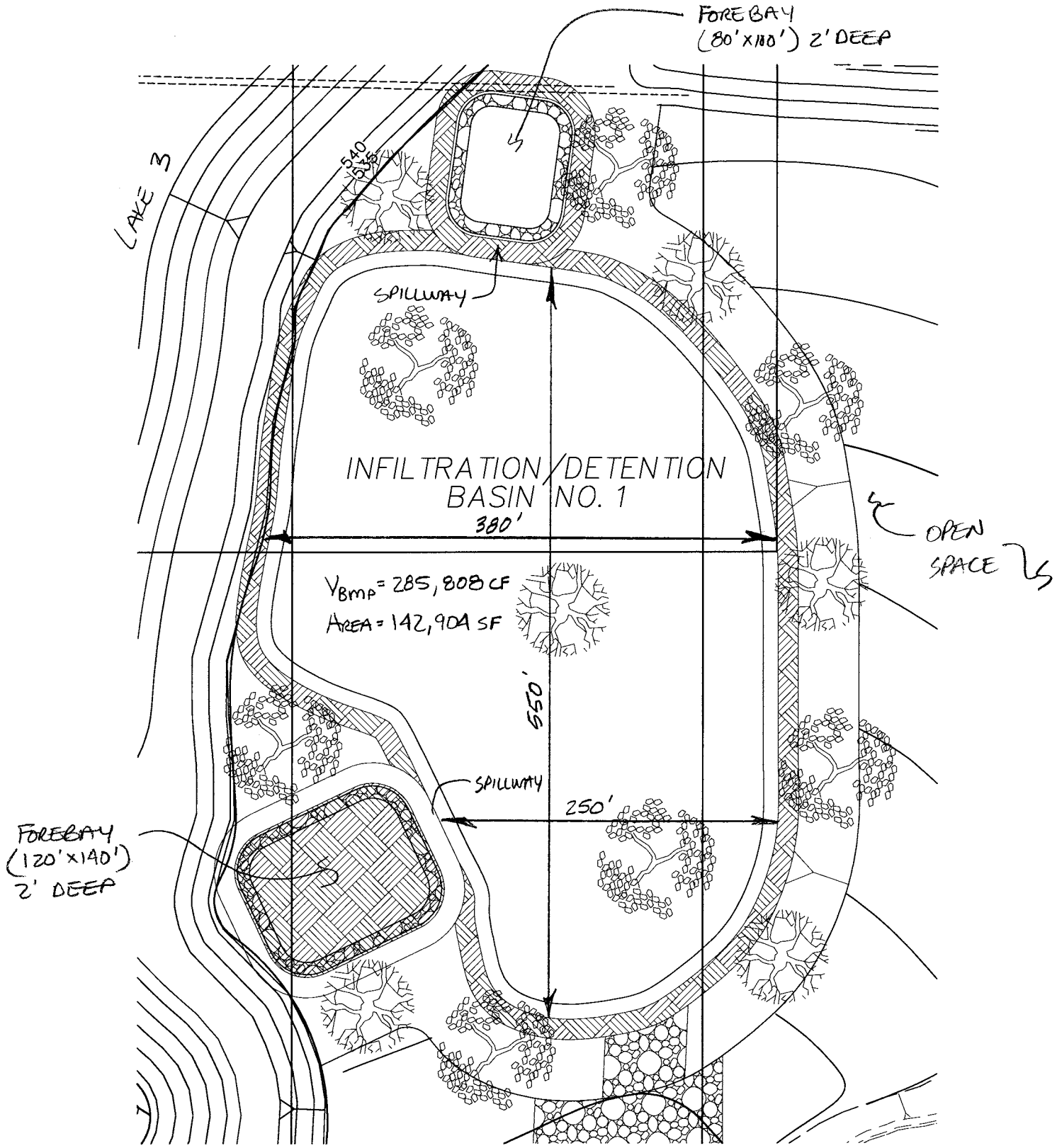
DESIGNED BY	RH/TB
DRAWN BY	PMP
CHECKED BY	RS

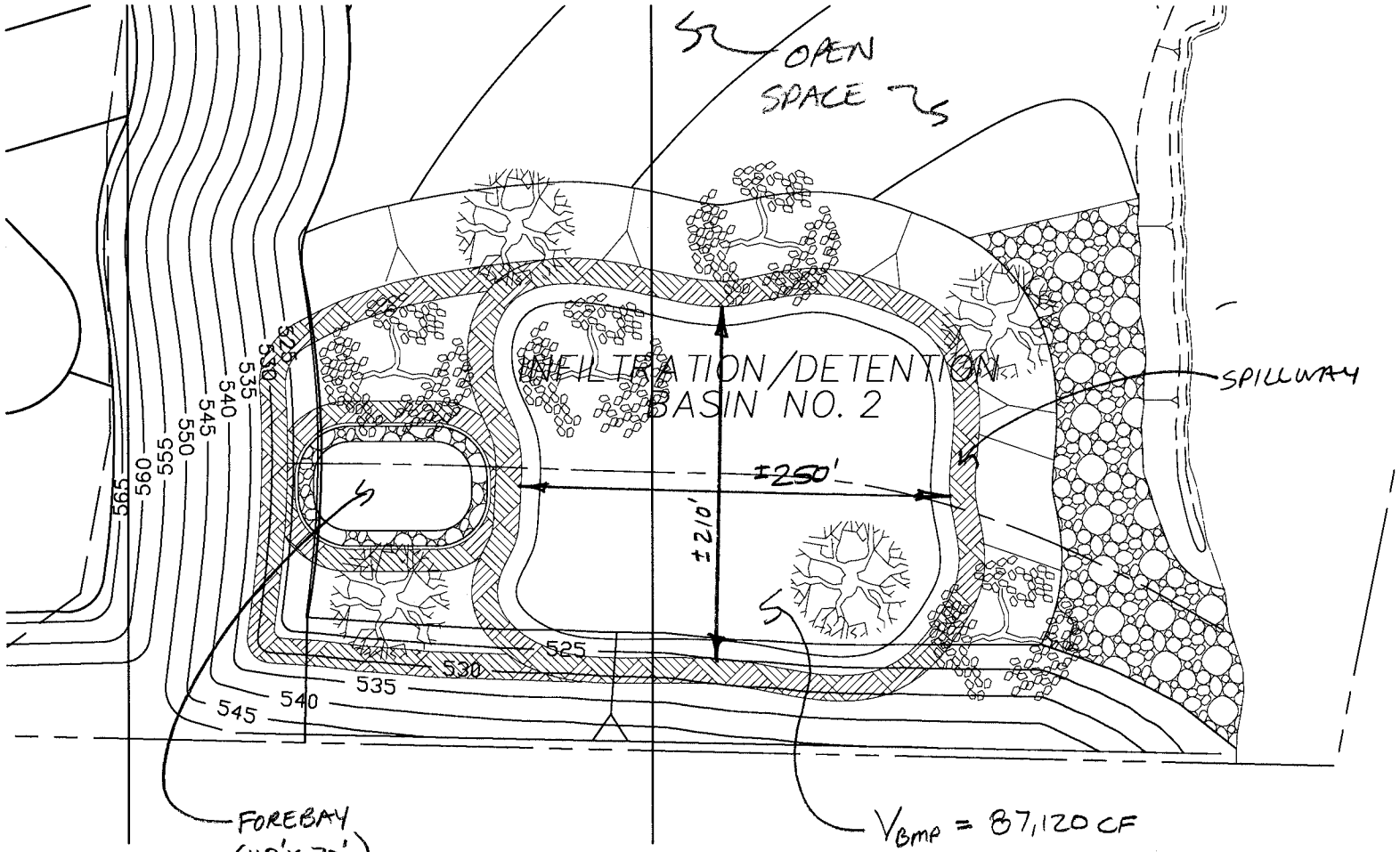
EDGEWATER PROJECT PLAN (APPLICANT PLAN)

SHEET 1 OF 7 SHEETS

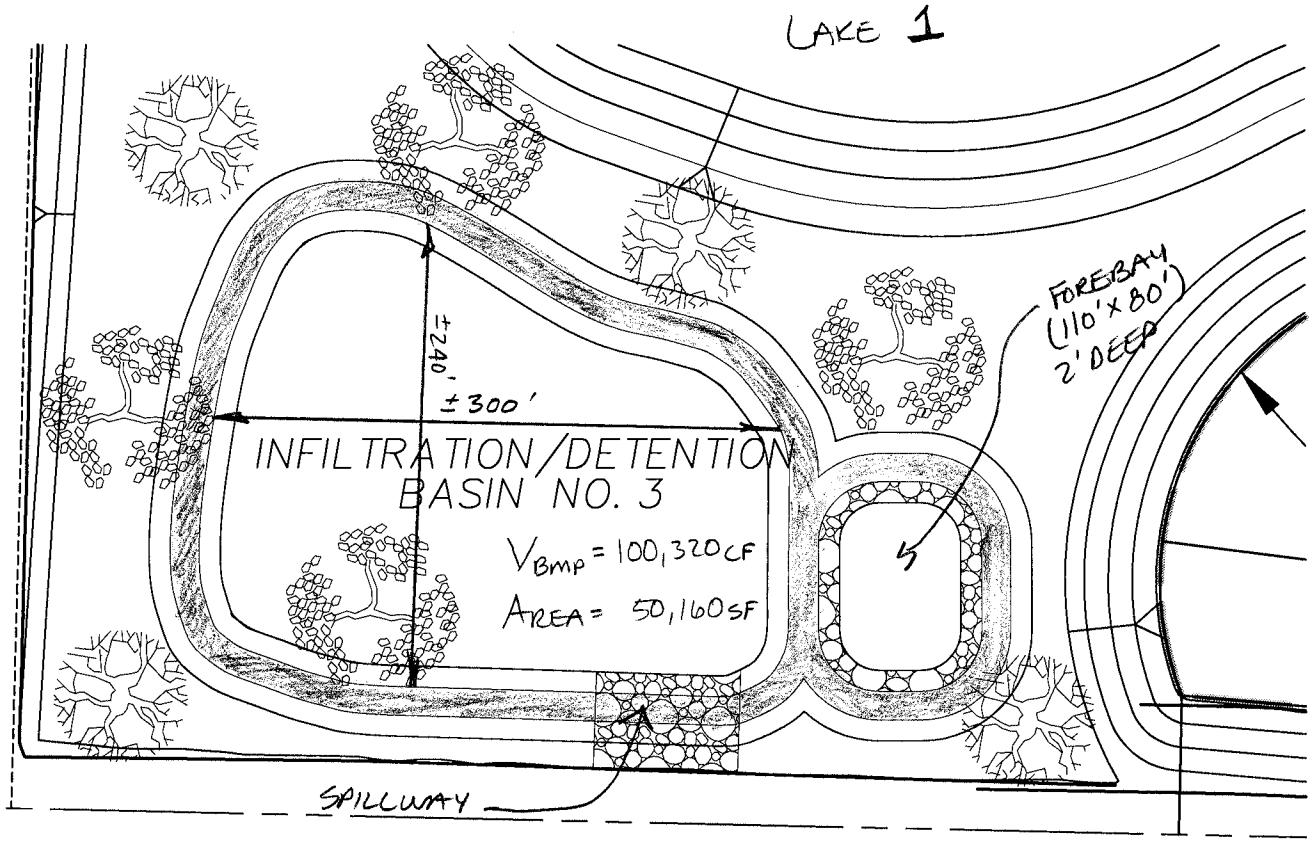
JOB NO. 10-1073-04



V_{BMP} = VOLUME OF RUNOFF STORED IN THE DETENTION BASIN BEFORE IT IS ALLOWED TO TOP THE SPILLWAY.



V_{BMP} = VOLUME OF RUNOFF STORED IN THE DETENTION BASIN BEFORE IT IS ALLOWED TO TOP THE SPILLWAY



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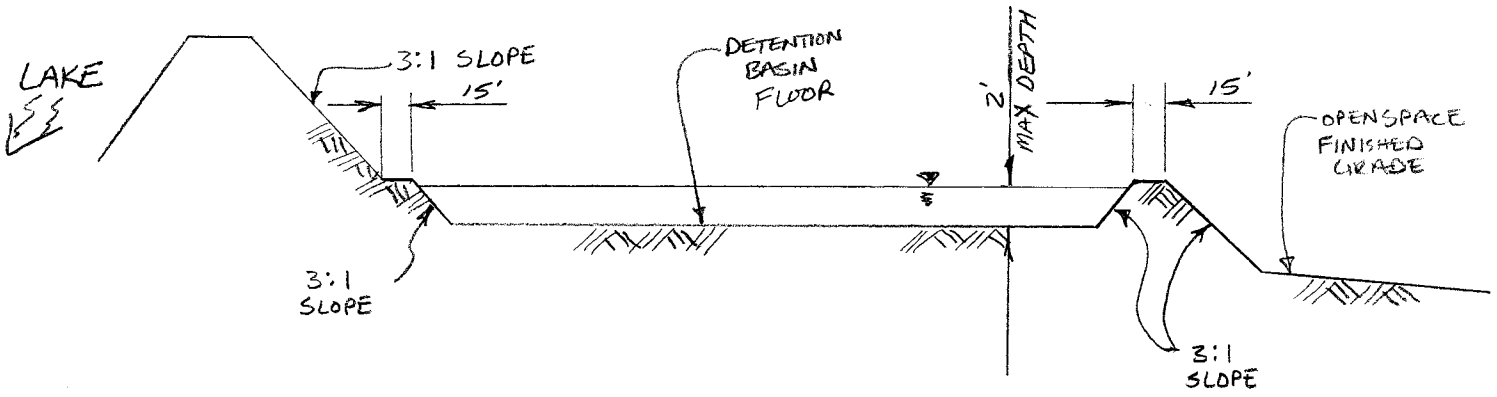

INFILTRATION / DETENTION BASIN
TYPICAL SECTION
NOT TO SCALE

APPENDIX B
BIOLOGICAL ASSESSMENT

CITY OF CHINO SUBAREA 2
RESOURCES MANAGEMENT PLAN

"THE PRESERVE"

Prepared for:

City of Chino
Community Development Department
13220 Central Avenue
Chino, California 91710
(909) 591-9812

Contact:

Robert Prasse, AICP

Prepared by:

Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, California 92408
(909) 884-2255

Contact:

Thomas J. McGill, Ph.D.
Regional Manager

January 2003

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1.0 INTRODUCTION

1.1 PURPOSE OF THE CHINO PRESERVE RESOURCES MANAGEMENT PLAN

The purposes of the Resources Management Plan (RMP) are to:

- Provide a detailed methodology for implementing the biological resources mitigation measures contained in the Environmental Impact Report (EIR) "Chino Subarea 2, The Preserve Master Plan" (SCH#2000121036);
- Provide a framework to ensure compliance with the EIR's biological resources mitigation measures; and
- Ensure that adequate reporting and monitoring of the mitigation measures in accordance with Section 21081.6 of the Public Resources Code (PRC).

Impacts were identified and mitigation measures were prepared for several biological resources within the Chino Subarea 2 Specific Plan area (Project Area)[1] including burrowing owl habitat, raptor foraging habitat, migratory bird and waterfowl habitat, federally and state listed species, Waters of the U.S., Waters of California, and other water resources available to wildlife. Through implementation of these mitigation strategies, including resource monitoring, the RMP ensures program success. Methodologies and requirements for implementing the mitigation measures have been included in the RMP for the biological resources identified in the EIR. This RMP is included as a part of the Final EIR.

Section 2 of this RMP provides a summary of the project description of the Subarea 2 Specific Plan as defined in the Draft EIR. Section 3 provides a summary of the biological resources found with the Specific Plan boundaries that were detailed in Appendix B, Biological Assessment, of the Draft EIR and further analyzed in the Recirculated Draft EIR (RDEIR). Please refer to Draft EIR and RDEIR for a complete set of these data. In addition, in order to provide further clarification, supplemental information is included in Section 3 that discusses the natural plant communities found within the

[1] The term "Project Area" means the Chino Subarea 2 Specific Plan area, which is also known as "The Preserve Specific Plan."

various land cover types previously identified within the Project Area. Section 4 is the mitigation implementation program for those mitigation measures listed in Section 5.4.6 of the RDEIR.

2.0 PROJECT DESCRIPTION

2.1 BACKGROUND

The proposed project includes the annexation of the largest remaining portion of the Chino Valley Dairy Preserve within the City of Chino's Sphere of Influence to allow for development of approximately half of the 5,435.6 acres comprising the Project Area. The City of Chino is preparing a master plan to guide the future development and annexation of the Project Area. The master plan consists of a comprehensive specific plan as authorized by Government Code Sections 65450 through 65457, and an 'umbrella' General Plan Amendment, which will link the specific plan to the City's existing General Plan and satisfy the requirement for consistency with the General Plan. The General Plan Amendment is an Area Plan, as authorized by Government Code Sections 65301(b) and 65303.

Subarea 2 is currently located within the San Bernardino County Dairy Preserve. In 1994, the Local Agency Formation Commission (LAFCO) placed the portion of the Dairy Preserve north of Merrill Avenue within the City of Ontario's Sphere of Influence and the remaining portion south of Merrill Avenue to the San Bernardino County line in the City of Chino's Sphere of Influence. The City of Chino addressed that portion of the Dairy Preserve within their Sphere of Influence in two parts, a western and eastern part. The western part, Subarea 1, consists of 1,810 acres and was planned and annexed into the City in 1998. The eastern part, Subarea 2, consists of the remaining 5,435.6 acres of the San Bernardino County Dairy Preserve within the City of Chino's Sphere of Influence. Subarea 2 is currently under the jurisdiction of the County of San Bernardino. The County will retain authority over the land use decisions until annexation occurs. The existing San Bernardino County General Plan designates Subarea 2 as Agriculture – Agriculture Preserve (AG-AP), which allows agricultural and dairy uses, and Resources Conservation (RC), which is essentially an open space zone that supports the conservation of biological resources.

The area in and around Subarea 2 contains a number of existing uses that will either remain or transition to urban uses. In the central and western portions of the Project Area are the Co-Composting Facility operated by the IEUA, the California Institution for Women (CIW-Chino), and Prado Regional Park (including Prado Lake). The Co-Composting Facility receives animal manure and wastewater sludge for recycling from dairies within the Chino Basin Dairy Area. Adjacent to the northwest corner of the Project Area is the California Institution for Men (CIM-Chino). Further west, in Chino Subarea 1 along Kimball Avenue is Inland Empire Utility Agency's (IEUA) Regional Wastewater Treatment Plant No. 5 (RP-5).

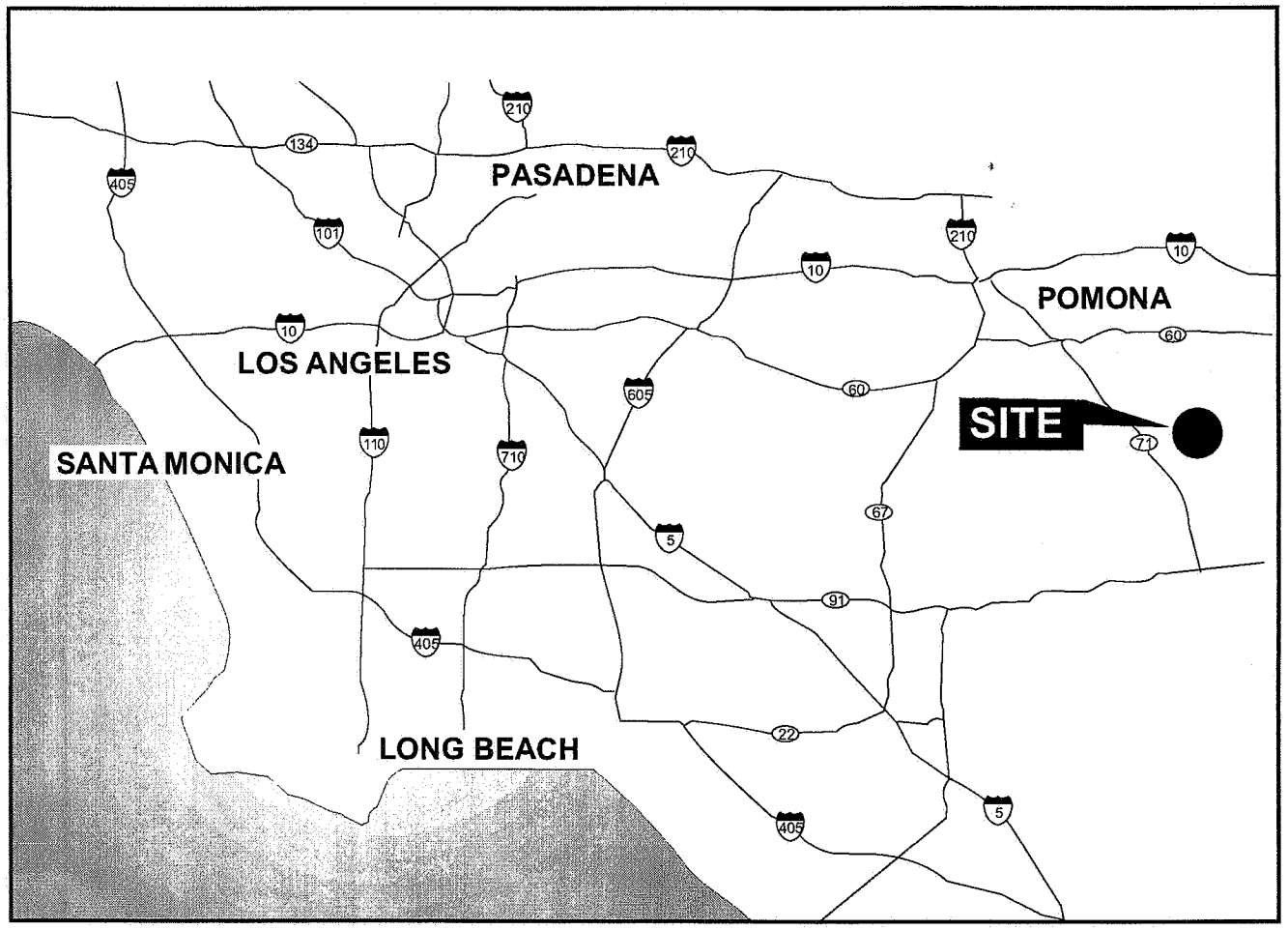
Approximately 2,835 acres of the Project Area are within the potential high-water inundation area that will be created by the raising of the Prado Dam 28 feet and the spillway 8 feet, pursuant to the Santa Ana River Maintstem Project (SARM). Raising Prado Dam will increase the depth of the current inundation area by 10 feet, from 556 to 566 feet above sea level. The increased height of the dam was designed to accommodate a 200-year or greater flood event. This will result in an increase in size of the entire existing Prado Flood Control Basin by 1,660 additional acres. The majority of this additional land will be acquired in fee by Orange County Flood Control District and the remainder will be placed in flowage easements. Most of the land within the 556-foot inundation area is either owned by the U.S. Army Corps of Engineers (USACE) or subject to flowage easements.

The City of Chino issued a Draft Program EIR (Draft EIR) in September 2001, which analyzed and disclosed the potential environmental effects associated with the implementation of the Subarea 2 Specific Plan. A partial recirculation of the Draft EIR (RDEIR) was released in August 2002 and included revisions to Section 5.4, Biological Resources. The RMP is being released with the Final EIR.

2.2 PROJECT LOCATION

The Project Area is located in the extreme southwestern corner of San Bernardino County, approximately 37 miles east of Los Angeles and 20 miles southwest of San Bernardino (Exhibits 1 and 2). The Project Area is adjacent to the cities of Chino and Ontario, and the unincorporated community of Eastvale in Riverside County, and is in the vicinity of Chino Hills, Norco, Corona, and the Prado Flood Control Basin. The Santa Ana River is located to the south of the Project Area and Chino Hills State Park to the west. The Project Area is part of the Chino Valley, a large and generally flat sub-portion of the larger San Bernardino Valley. The lower Chino Valley transitions to the Prado Basin, a major feature of the Santa Ana River (SAR) watershed. The SAR watershed is the largest coastal river system in Southern California, flowing from the slopes of the San Bernardino Mountains to the Pacific Ocean at Huntington Beach approximately 30 miles to the southwest.

Regional access to the Project Area is provided via State Route 71 to the west, State Route 91 to the south, Interstate 15 to the east, and State Route 60 to the north. Euclid Avenue (SR 83) defines the western boundary of the Project Area. Pine Avenue runs east west through the Project Area, providing a link via Schleisman Avenue to Interstate 15. Portions of Kimball and Merrill Avenues form the northern boundary (Exhibit 3).



NORTH

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SCALE IN MILES

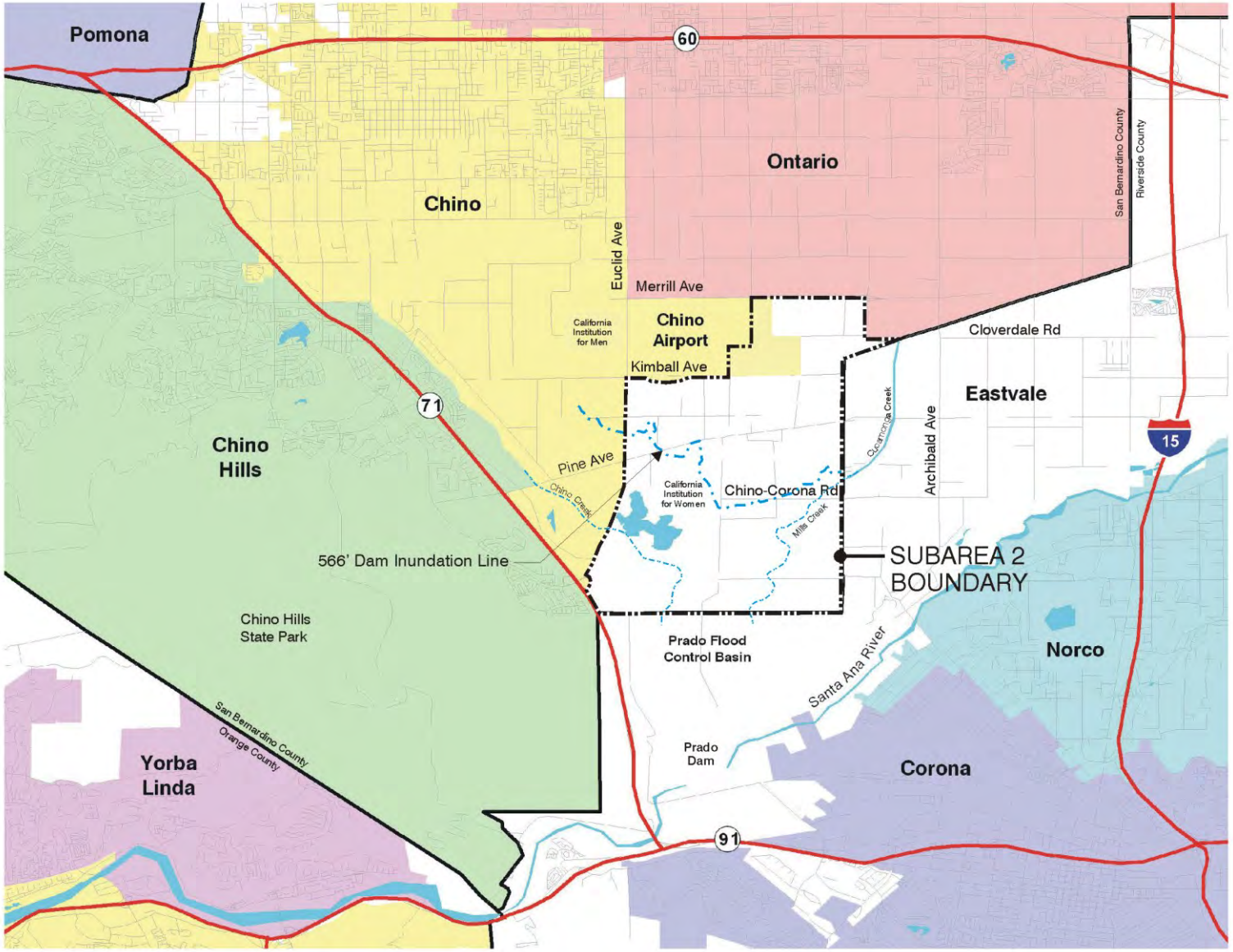
Michael Brandman Associates

05760012 • 8/2000

Exhibit **1**

Regional Location Map

THE PRESERVE • CHINO SUBAREA 2



SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

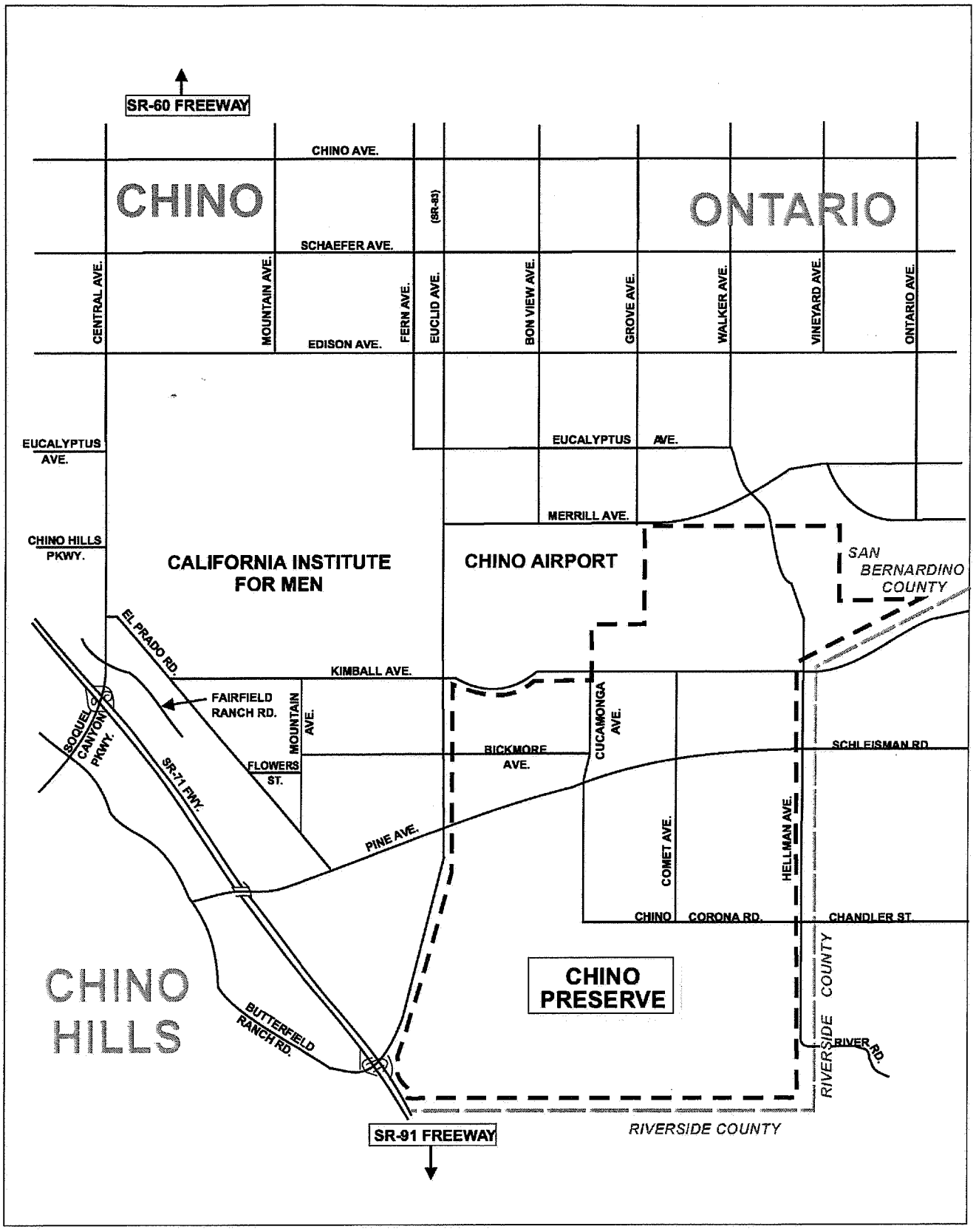
Michael Brandman Associates

05760012 · 6/2001

Exhibit **2**

Local Vicinity Map

THE PRESERVE • CHINO SUBAREA 2



NORTH

Michael Brandman Associates

05760012 - 11/2000

Exhibit 3

Project Location

THE PRESERVE • CHINO SUBAREA 2

2.3 PHYSICAL CHARACTERISTICS

Elevations in the Project Area range from about 500 to 600 feet above sea level. The Project Area is characterized by a lack of drainage facilities. During major storm events, runoff is carried via sheet flow and gulleys through the Project Area in a southwesterly direction, often inundating the dairies. This runoff pattern contributes to water quality problems in downstream receiving waters. Two major creeks traverse the lower portions of the Project Area--Chino Creek, which drains southerly along the base of the Chino Hills, and Cucamonga Creek flood channel, which becomes Mill Creek before draining into the eastern portion of the Prado Basin and eventually into the Santa Ana River. Two other smaller drainages extend south from the Chino Airport through the Project Area, before joining Prado Lake within Prado Regional Park. These drainage courses generally coincide with the flood hazard areas below the 566-foot dam inundation area.

2.4 SUBAREA 2 SPECIFIC PLAN

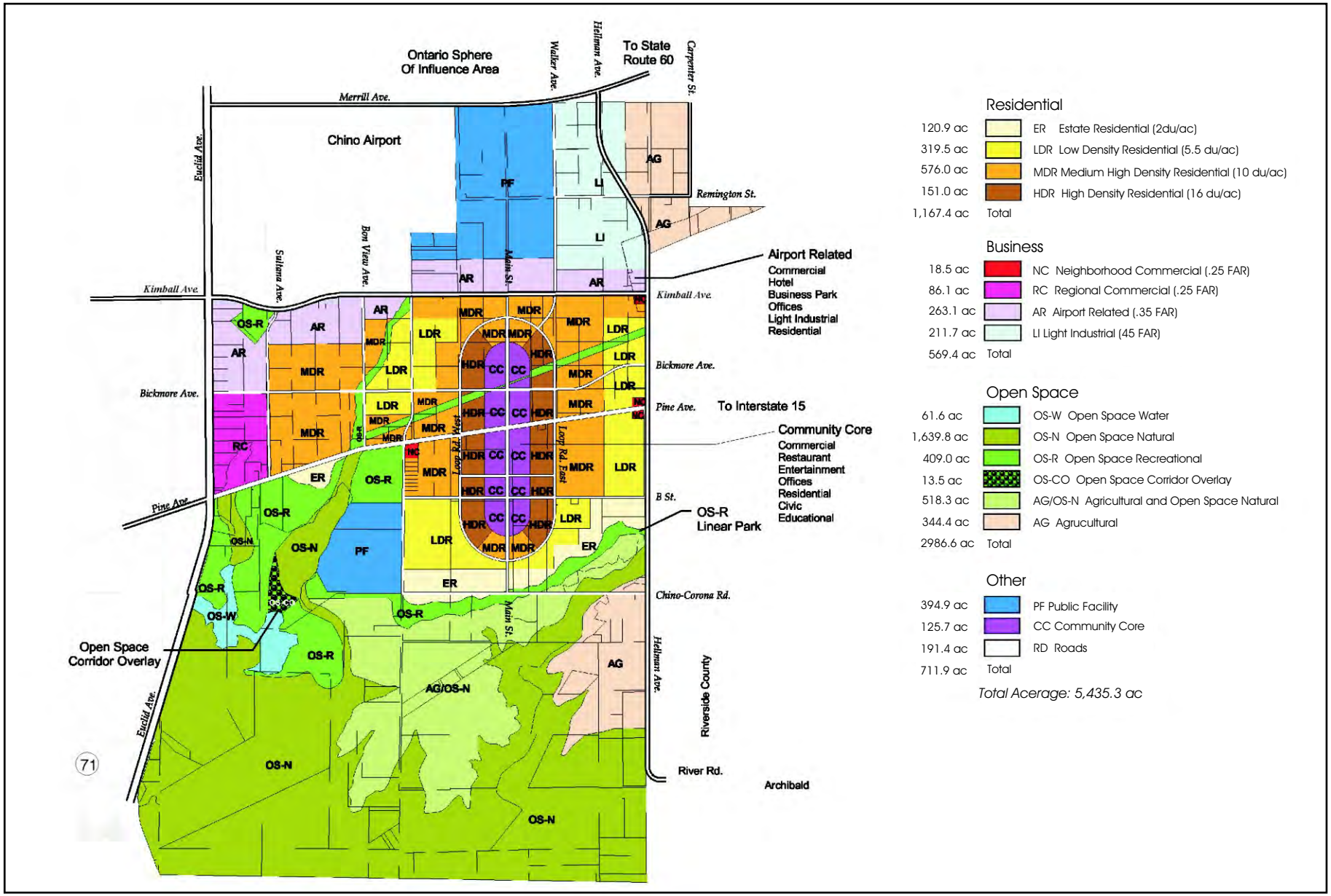
The proposed Subarea 2 Specific Plan includes a variety of land uses intended to implement the City of Chino's vision for the Project Area (Exhibit 4).

2.4.1 Development Concept

The project development includes up to 9,779 dwelling units on 1,167 acres; 696 acres of business uses (Community Core, Light Industrial, Airport Related, Regional Commercial, Neighborhood Commercial); 586 acres of Public Facilities and Rights-of-Way; and approximately 2,987 acres in Open Space (Agricultural, Agricultural/Open Space-Natural, Open Space-Recreation, Open Space-Natural, and Open Space-Water). All proposed developed uses are concentrated in the northern 2,600 acres of the Project Area, above the Prado Basin high water inundation line (elevation 566 feet), which is a significant influence on the planning area. The remaining 2,835 acres of the Project Area south of the 566-foot inundation line are planned for low-intensity Recreation, Agriculture, and Natural Open Space.

2.4.2 Multi-Purpose Open Space Feature

The area within the 566-foot dam inundation area has excellent habitat value for raptors, migratory birds and waterfowl and riparian species. The area is planned to provide a combination of natural open space conservation, passive recreation, and agricultural uses.



Residential

120.9 ac	ER	Estate Residential (2du/ac)
319.5 ac	LDR	Low Density Residential (5.5 du/ac)
576.0 ac	MDR	Medium High Density Residential (10 du/ac)
151.0 ac	HDR	High Density Residential (16 du/ac)
1,167.4 ac	Total	

Business

18.5 ac	NC	Neighborhood Commercial (.25 FAR)
86.1 ac	RC	Regional Commercial (.25 FAR)
263.1 ac	AR	Airport Related (.35 FAR)
211.7 ac	LI	Light Industrial (45 FAR)
569.4 ac	Total	

Open Space

61.6 ac	OS-W	Open Space Water
1,639.8 ac	OS-N	Open Space Natural
409.0 ac	OS-R	Open Space Recreational
13.5 ac	OS-CO	Open Space Corridor Overlay
518.3 ac	AG/OS-N	Agricultural and Open Space Natural
344.4 ac	AG	Agrucultural
2986.6 ac	Total	

Other

394.9 ac	PF	Public Facility
125.7 ac	CC	Community Core
191.4 ac	RD	Roads
711.9 ac	Total	

Total Acerage: 5,435.3 ac

SOURCE: The Planning Center

NORTH

MAP NOT TO SCALE

Michael Brandman Associates

05760012 · 6/2001

Exhibit **4**

Land Use Plan

THE PRESERVE • CHINO SUBAREA 2

3.0 SUMMARY OF BIOLOGICAL RESOURCES

Baseline biological surveys were conducted by Michael Brandman Associates (MBA) in 2000 as part of preparing the September 2001 Draft EIR and in 2002 for the August 2002 RDEIR. Sensitive habitats within the Project Area include extensive riparian woodlands along the major stream channels below the 566-foot inundation line, freshwater marshes, and open spaces associated with agricultural uses. Fallow agricultural fields, pastures, eucalyptus windrows, and detention basins within agricultural open spaces have some habitat value for raptor foraging and nesting. A variety of sensitive plant and animal species are known to occur in the Prado Basin below the 566-foot inundation line. Federal or state-listed wildlife species that occur or are expected to be present in the Project Area below the 566-foot inundation line include the least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo. The burrowing owl, a State species of special concern, has been observed in the Project Area.

3.1 LAND COVER TYPES AND NATURAL PLANT COMMUNITIES

The RDEIR addressed five different land cover types within the Project Area: surface waters, agricultural lands, windrows, riparian woodlands, and developed areas. Some of these land cover types were broken down further into sub-categories as defined in the RDEIR and as presented in Table 3-1. This table provides the acreages and percentage for each land cover type within the Project Area and indicates if these land cover types occur above and/or below the 566-foot line. Exhibit 5 illustrates the location of the land cover types within the Project Area. As part of developing the RMP in order to detail vegetation characteristics, the land cover types within the Project Area were further categorized for the type of natural plant community or vegetation association they supported as projected in Table 3-2. Although provided in greater detail, the Natural Plant Communities identified are consistent with the Land Cover Types identified in the EIR.

3.1.1 Natural Plant Communities

There are nine different plant communities or vegetation associations as defined by the Holland natural plant community classification codes or by MBA. Holland uses a numbered inventory system of California's vegetation communities, known as element codes: Non-native Grassland (42200), Southern Cottonwood Willow Riparian Forest (61330), Southern Willow Scrub (63320), Mule Fat Scrub (63310), and Coastal and Valley Freshwater Marsh (52410). These numbers are referenced at the beginning of each community description. Four additional communities were defined by MBA that are not included in Holland's description (disturbed, open water, ornamental woodland, and Arundo scrub) because they do not represent natural plant communities under Holland's classification system

due to the disturbed nature of these areas. These four plant communities have become established in the area due to human influence. However, wildlife has adapted to their presence and can be found inhabiting these plant communities. Exhibit 6 shows the location of each plant community within the Project Area and Appendix A provides a more detailed description. Note that most (> 90%) of the habitat above the 566-foot inundation line is categorized as disturbed. This is due to the predominance of dairies, pastures, and other active agricultural land uses in the area. The relationship between these plant communities and associated land cover types is discussed in Section 3.1.2 below.

TABLE 3-1
LAND COVER TYPES FOUND ONSITE

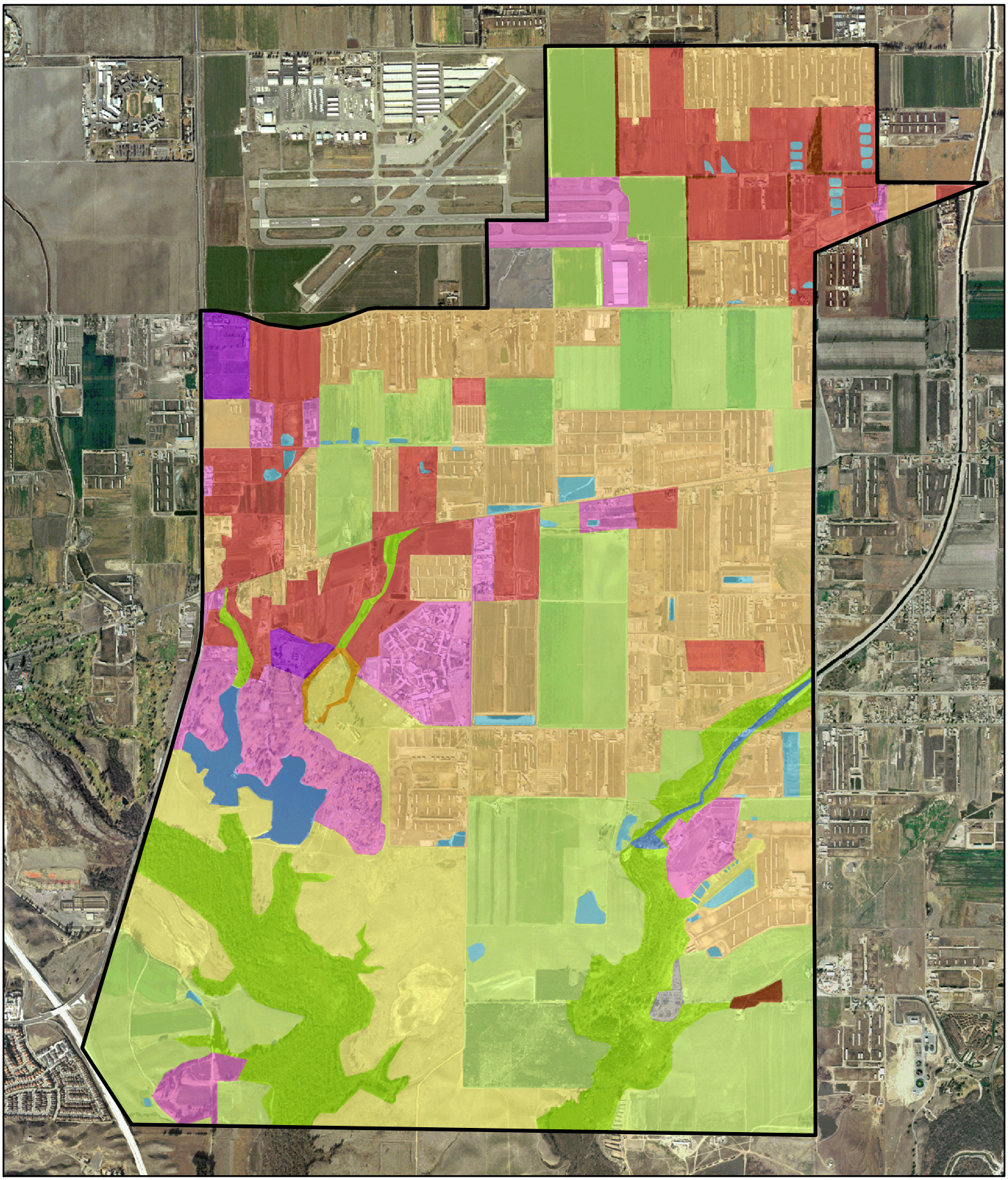
Habitat	Below 566 Line (acres)	Above 566 Line (acres)	Totals (acres)
Surface Water Areas			
▪ Detention Basin	36	38	74
▪ Marsh	9	--	9
▪ Open Water	77	--	77
Agricultural Land			
▪ Dairy	352	1,084	**1,436**
▪ Pasture	144	497	**641**
▪ Active Fields	837	703	**1,540**
▪ Fallow Fields	545	--	**545**
Windrows	7	17	**24**
Riparian	530	1	**531**
Developed Areas			
▪ Developed	272	191	**463**
▪ Disturbed	9	34	**43**
▪ Equestrian	17	35	**52**
Totals	**2,835**	**2,600**	**5,435**

3.1.2 Relationship between Land Cover Types and Natural Plant Communities

Table 3-2 provides a summary of these natural plant communities occurring within Subarea 2 and the acreages found within each of the listed land cover types. The following paragraphs briefly summarize each land cover type, as defined in the RDEIR, and discuss the natural plant communities found within each land cover type.

Surface Water Areas

There are three types of surface water within the Project Area: detention basin/drainages, marsh, and open water, totaling approximately 160 acres. Most of these surface water areas are comprised of disturbed vegetation (48 acres), non-native grasses (15 acres), or open water (84 acres). Open water



Source: City of Chino, MBA

Exhibit **5**

Land Cover Types

Michael Brandman Associates

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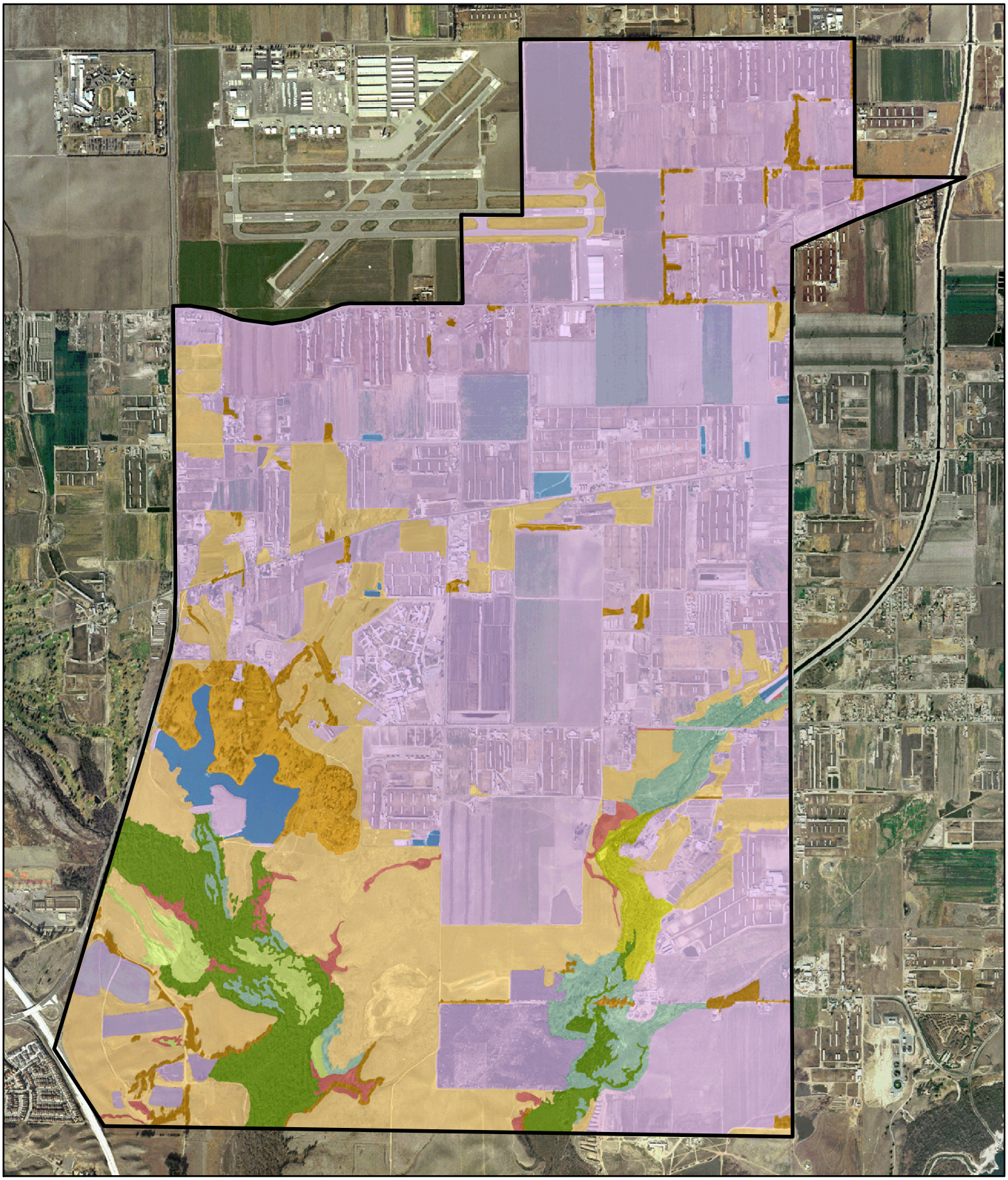
THE PRESERVE SUBAREA 2



Source: City of Chino, MBA

NORTH

Michael Brandman Associates

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Exhibit **6**

Natural Plant Communities

THE PRESERVE SUBAREA 2

TABLE 3-2
PLANT COMMUNITIES AND LAND COVER TYPES FOUND ONSITE

Plant Community	Land Cover Type												TOTAL
	Surface Water Areas			Agricultural Land				Windrows	Riparian	Developed Areas			
	Detention Basins	Marsh	Open Water	Dairies	Pasture	Active Fields	Fallow Fields			Developed	Disturbed	Equestrian	
Disturbed	48			1,352	495	1,195	67		21	250	43	31	**3,502**
Non-Native Grassland	11	4		69	134	321	468[1]		40	64		21	**1,127**
Southern Cottonwood-willow Riparian									234				**234**
Mulefat Scrub	3					9	6		27				**45**
Southern Willow Scrub									144				**144**
Coastal and Valley Freshwater Marsh		5							25				**30**
Open Water	12		72										**84**
Ornamental Woodland				15	11	15	10	24		149			**224**
Arundo Scrub			5						40				**45**
Area Totals (Acres)	**74**	**9**	**77**	**1,436**	**640**	**1,540**	**545**	**24**	**531**	**463**	**43**	**52**	**5,435**

Note: [1]Although the species composition is currently too sparse to be characterized as coastal sage scrub, approximately 108 acres of the non-native grassland below the 566-foot inundation line, if left undisturbed, could transition to coastal sage scrub. For a more detailed explanation see Appendix A.

bodies include Prado Lake and the upper portion of Mill Creek and provide foraging habitat for raptors and other wildlife species and are used by migratory waterfowl. Very few native plants and plant communities exist within these surface water areas. The majority of the detention basins were created to control dairy activity run-off. These basins accumulate surface flows containing manure and other dairy waste from the dairies after heavy rains and are not regulated by USACE as a Water of the U.S. In a few cases, a basin may have been placed in what could have historically been drainages. Some of these areas could potentially be regulated by USACE and California Department of Fish and Game (CDFG).

Agricultural Fields

There are four types of agricultural lands within the Project Area: dairy land, pastures, cultivated agriculture croplands, and fallow fields totaling approximately 4,161 acres. Remnants of native vegetation are typically very minimal or absent within all of these areas with most of the plant community structure represented as disturbed (3,109 acres), non-native grassland (992 acres), or ornamental woodland (51 acres).

The dominant vegetation within the agricultural lands is planted ornamental landscaping, cultivated crops, and fields of non-native grass and opportunistic weedy species. Weedy species found throughout the fields included wild oat, ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), soft chess (*Bromus hordeaceus*), black mustard (*Brassica nigra*), red-stemmed filaree, and cheeseweed (*Malva parviflora*).

Fallow fields occur primarily below the 566-foot inundation line. The majority of these fields were previously cultivated fields, then grazed by dairy cows after harvest and subsequently left fallow. Fallow fields also develop characteristic ruderal vegetation, composed of a number of weedy species as described above. These fields are used as foraging habitat by local raptor species but could be restored and/or enhanced to provide habitat for burrowing owls.

Windrows

Windrows are typically a result of historic agricultural activities. All 24 acres of windrows within the Project Area are comprised of ornamental woodland vegetation and are dominated by blue gum (*Eucalyptus globoratum*), although other species exist, including olive (*Fraxinus* sp.) pine (*Pinus* spp.), and cypress (*Cypressus* spp.). These communities, though comprised of non-native species, are located mostly within the agricultural fields above the 566-foot inundation line and provide nesting and foraging perches for bird species (see Exhibit 5).

Riparian Woodlands

The riparian woodlands contain dense, broad-leaved, 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 creek channels, adjacent sandy or gravelly floodplains, and low stream terraces. The 531 acres of riparian woodlands onsite are comprised of southern cottonwood-willow riparian forest (234 acres), southern willow scrub (144 acres), mulefat scrub (27 acres), coastal and valley freshwater marsh (25 acres), non-native grassland (40 acres), disturbed (21 acres), and Arundo scrub (40 acres). Most of these riparian communities occur below the 556-foot elevation line along Chino and Mill Creeks. 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 mule fat (*Bacharis salicifolia*).

Developed

Within the Project Area, Developed Areas include the CIW-Chino, portions of Prado Regional Park, Prado Recreational Dog Training Facility, an industrial parcel southeast of Chino Airport, the IEUA manure composting facility, commercial nurseries, and several equestrian facilities. These areas include commercial buildings, infrastructure, residential homes, and roads. They support a very limited amount of vegetation, comprised of non-native species planted for their aesthetic and utilitarian values, ornamental vegetation (149 acres), barren/disturbed ground (324 acres), non-native grassland (85 acres).

3.2 SENSITIVE BIOLOGICAL RESOURCES

Tables 3-3 and 3-4 identify those species of plants and wildlife known to occur, or have the potential to occur, on or within the vicinity of the Project Area that have been afforded special recognition by the federal government, the State of California, or the California Native Plant Society (CNPS). Recognition is given due to the species' declining or limited population sizes, resulting in most cases from habitat loss. Sources used to determine sensitivity status and occurrence of biological resources include: plants--U.S. Fish and Wildlife Service (USFWS) (1996a,b), the CDFG Natural Diversity Data Base (CNDDB) (2000), *Federal Register* listing package; and CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California (1994); wildlife--USFWS (1996b), and the CNDDB (2000). Appendix B provides a list of plant and wildlife species observed in the Project Area.

TABLE 3-3
SENSITIVE PLANT SPECIES POTENTIALLY OCCURRING ONSITE

Species	Status[1]	Habitat	Potential For Occurrence[2]
Federal Threatened and Endangered Species			
Santa Ana River Woollystar (*Eriastrum densifolium* ssp. *sanctorum*)	FE SE CNPS List 1B	Sandy soils of river floodplains and terraced alluvial deposits	Low
Braunton's Milk-vetch (*Astragalus brauntonii*)	FE CNPS List 1B	Carbonate soils in coniferous forest, chaparral, coastal sage scrub, and valley and foothill grassland	Very Low
Federal and State Sensitive Species			
Many-stemmed Dudleya (*Dudleya multicaulis*)	FSC CNPS List 1B	Coastal sage scrub, chaparral and grasslands and rock outcrops	Very Low
Smooth tarplant (*Centromedia pungens* ssp. l*aevis*)	SSC CNPS List 1B	Grassland, ruderal and alkali meadows	Very Low
CNPS Listed Species			
Intermediate Mariposa Lily (*Calochortus weedii intermedius*)	CNPS List 1B	Rocky areas in chaparral, coastal scrub, and foothill grasslands.	Low[3]
Coulter's Saltbush (*Atriplex coulteri)*	CNPS List 1B	Coastal dunes, coastal bluff scrub last observed in 1917.	Very Low[3]
Chaparral Sand Verbena (*Abronia villisa* var. *aurita)*	CNPS List 1B	Sandy areas in chaparral and coastal scrub last observed in 1934.	Very Low[3]

Notes: [1] Status Legend:

U.S. Fish and Wildlife Service
FE Federal Endangered
FSC Federal Species of Concern

California Department of Fish and Game
SE California Endangered

California Native Plant Society
CNPS List 1B

[2]Potential for Occurrence:

Very Low = Suitable habitat no longer exists for the species in the Project Area or its immediate vicinity. No recent records exist of the species occurring in the Project Area or its vicinity.

Low = No recent records exist of the species occurring in the Project Area or its immediate vicinity (within approximately 5 miles) and/or the diagnostic habitat requirements strongly associated with the species no longer occur in the Project Area or its immediate vicinity.

Moderate = Either a historical record exists of the species in the Project Area or its immediate vicinity or the diagnostic habitat requirements associated with the species occur in the Project Area or its immediate vicinity.

High = Both a historical record exists of the species in the Project Area or its immediate vicinity and the diagnostic habitat requirements strongly associated with the species occur in the Project Area or its immediate vicinity.

Present = Species observed during 2000 baseline biological surveys.

[3] Modified from the Recirculated Draft EIR.

Source: CNDDB 2001

TABLE 3-4
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING ONSITE

Species	Status[1]	Habitat	Potential For Occurrence[2]
Federal Threatened and Endangered Species			
Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*)	FE	Colton dunes (Delhi soils series) open sand	Very Low
Santa Ana sucker (*Catostomus santaanae*)	FT SSC	Small to medium-sized streams	Very Low
Arroyo toad (*Bufo californicus*)	FE SSC	Washes and arroyos with open water; sand or gravel beds; for breeding, pools with sparse overstory vegetation.	Very Low
California red-legged frog (*Rana aurora draytonii*)	FT SSC	Streams with slow moving water and deep pools; dense shrubby riparian vegetation at pool edges	Very Low
Least Bell's vireo (*Vireo bellii pusillus*)	FE SE	Southern cottonwood willow riparian forest	Present
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE SE	Riparian woodlands, water-filled creeks or channels and scattered overgrown clearings	Moderate
Southern bald eagle (*Haliaeetus leucocephalus*)	FT (FPD) SE	Winters locally at deep lakes and reservoirs (mainly at Lake Mathews or Big Bear Lake)	Breeding-Very Low[3] Foraging-Moderate[3]
State Threatened and Endangered Species			
Western yellow-billed cuckoo (*Coccyzus Americanus occidentalis)*	SE	Riparian communities	Moderate
Peregrine falcon (*Falco peregrinus*)	SE FSC	Estuaries, wetlands, and coastal bluffs	Breeding-Low Foraging-High
Federal and State Sensitive Species			
Arroyo chub (*Gila orcutti*)	SSC	Warm streams with highly variable seasonal stream flows	Very Low
Orange-throated whiptail (*Cnemidophorus hyperythrus*)	SSC	Open sage scrub or chaparral with loose soils	Low
San Diego horned lizard (*Phrynosoma coronatum blainvilleri*)	SSC	Open areas of sandy soil with coastal sage scrub, chaparral, grassland, riparian, and washes and watercourses	Low
Silvery legless lizard (*Anniella pulchra pulchra*)	FSC SSC	Sandy or loose organic soils or with abundant leaf litter	Low
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	SSC	Variety of habitats, including chaparral and sage scrub	Low
Two-striped garter snake (*Thamnophis hammondii*)	SSC	Perennial and intermittent streams having rocky beds and bordered by willow thickets or other dense vegetation	Present
Southwestern pond turtle (*Clemmys moromata pallida*)	FSC SSC	Lakes and ponds, also pools in rivers and streams	Moderate[3]
Golden eagle (*Aquila chrysaetos*)	SFP SSC	Forages in grasslands and other open terrain	Breeding-Low Foraging-High[3]

TABLE 3-4 (Cont.)
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING ONSITE

Species	Status[1]	Habitat	Potential For Occurrence[2]
Long-eared Owl (*Asio otus*)	CSC	Nests in dense riparian woodlands, as well as oak woodlands; forages in open fields with adequate prey	Moderate [3]
White-tailed kite (*Elanus leucurus*)	FSC SFP	Open woodlands and grasslands	Moderate
Ferruginous hawk (*Buteo regalis*)	FSC SSC	Grasslands and other open terrain	High
Burrowing owl (*Athene cunicularia hypugea*)	SSC	Grasslands, savannahs and sparse brushlands	Present
Cooper's hawk (*Acipiter cooperii*)	SSC	Oak and riparian woodlands	Present
Sharp-shinned hawk (*Accipiter striatus*)	SSC	Oak and riparian woodlands	Low[3]
Northern harrier *Circus cyaneus*)	SSC	Grasslands and other open terrain	Present
Prairie falcon (*Falco mexicanus*)	SSC	Grasslands, coastal sage scrub, and estuaries	Breeding-Low[3] Foraging-Moderate
Loggerhead shrike (*Lanius ludovicianus*)	FSC SSC	Grassland and open scrub	Present
Western least bittern (*Ixobrychus exilis hesperis*)	FSC SSC	Densely vegetated brackish and freshwater marshes	Moderate[3]
California horned lark (*Eremophila alpestris actia*)	SSC	Open fields and grasslands	Present
Tricolored blackbird (*Agelaius tricolor*)	FSC SSC	Marshes and grassland communities	Present[3]
Yellow-breasted Chat (*Icteria virens*)	SSC	Summer resident, nests in low dense riparian scrubs.	Moderate[3]
Yellow warbler (*Dendroica petechia*)	SSC	Mature riparian woodland, especially where dominated by willows or alders	Present
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	SSC	Coastal sage scrub, slopes with sparse shrubs and open grassy areas intermixed.	Low
Townsend's big-eared bat (*Corynorhinus townsendii*)	FSC SSC	A wide variety of habitats including woodlands and arid grasslands; roosts in mines and caves	Moderate
California mastiff bat (*Eumops perotis californicus*)	FSC SSC	Open areas with high cliffs	Moderate
Small-footed myotis (*Myotis ciliolabrum*)	FSC	Forages among trees or over brush; roosts in caves, mines, and in cliff or rock openings	Moderate
Yuma myotis (*Myotis yumanensis*)	FSC SSC	Water and wooded canyon bottoms; roosts in caves and abandoned buildings	Moderate
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC	Open areas, typically occurring in alluvial sage scrub and open Riversidean sage scrub	Present
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	SSC	Sage scrub	Low

TABLE 3-4 (Cont.)
SENSITIVE WILDLIFE SPECIES POTENTIALLY OCCURRING ONSITE

Species	Status[1]	Habitat	Potential For Occurrence[2]
Southern grasshopper mouse (*Onychomys torridus ramona*)	SSC	Open coastal sage scrub, mixed chaparral, and riparian areas	Low
San Diego desert woodrat (*Neotoma lepida intermediai*)	SSC	Variety of habitats from sea level to 8,500 ft. elevation	High
Northern red diamond rattlesnake (*Crotalus ruber ruber*)	SSC	Sage scrub and chaparral, often in rocky areas, also in grasslands, dry washes, and woodlands	Low
Western spadefoot (*Scaphiopus hammondii*)	SSC	Arid and semi-arid regions in lowlands and foothills in washes, river floodplains, alluvial fans, playas, and Alkali flats	Moderate[3]

Notes: [1] Status Legend:

U.S. Fish and Wildlife Service
- FE Federal Endangered
- FT Federal Threatened
- FPD Federal Proposed for Delisting
- FSC Federal Species of Concern

California Department of Fish and Game
- SE California Endangered
- SSC Species of Special Concern
- SFP Fully Protected
- CSC Considered sensitive by the California Natural Diversity Data Base.

[2] Potential for Occurrence:

Very Low = Suitable habitat no longer exists for the species in the Project Area or its immediate vicinity. No recent records exist of the species occurring in the Project Area or its vicinity.

Low = No recent records exist of the species occurring in the Project Area or its immediate vicinity (within approximately 5 miles) and/or the diagnostic habitat requirements strongly associated with the species no longer occur in the Project Area or its immediate vicinity.

Moderate = Either a historical record exists of the species in the Project Area or its immediate vicinity or the diagnostic habitat requirements associated with the species occur in the Project Area or its immediate vicinity.

High = Both a historical record exists of the species in the Project Area or its immediate vicinity and the diagnostic habitat requirements strongly associated with the species occur in the Project Area or its immediate vicinity.

Present = Species observed during 2000 baseline biological surveys.

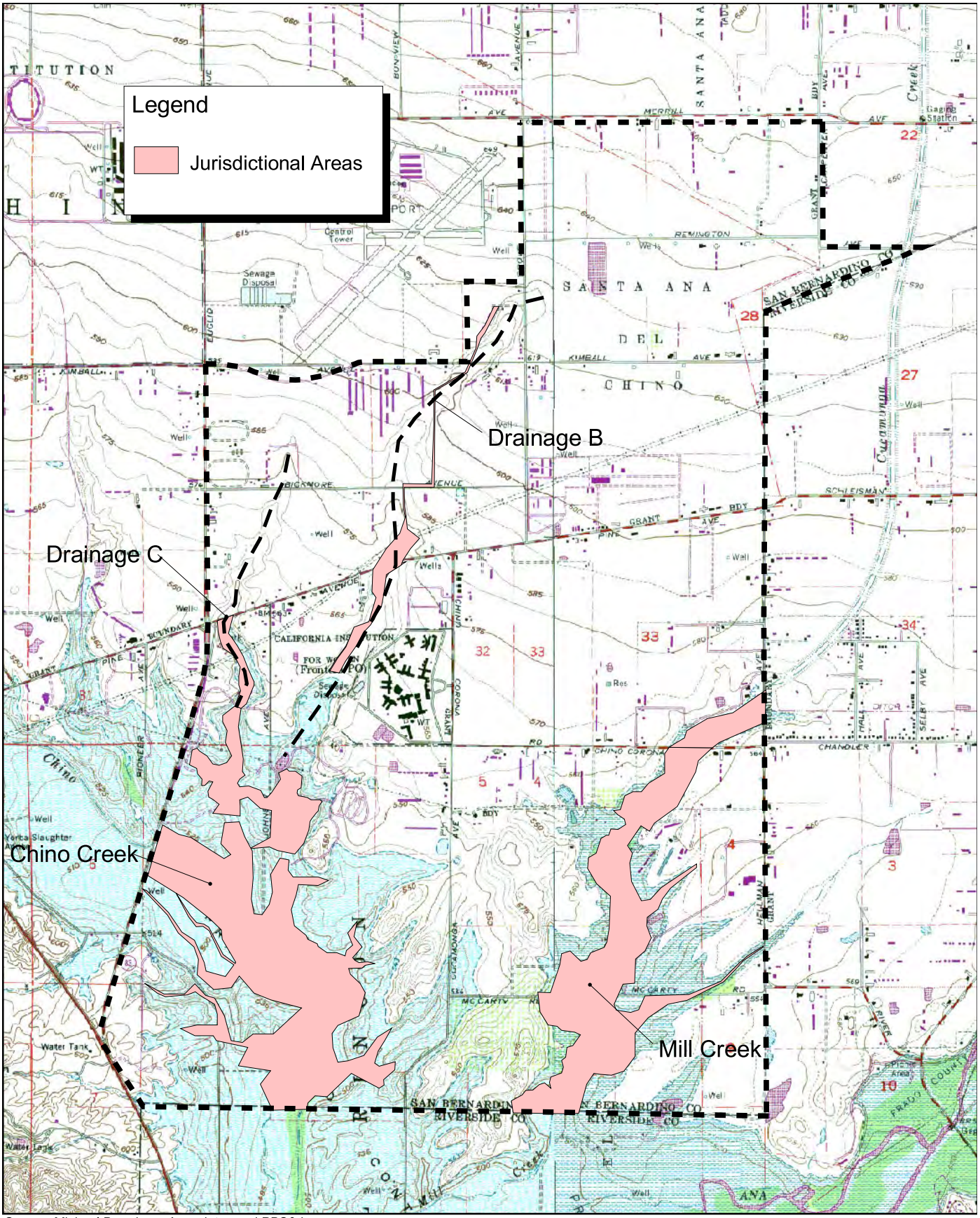
[3] Modified from the Recirculated Draft EIR.

Source: CNDDB 2000

The take of any Federal Endangered Species (FE) or Federal Threatened Species (FT) requires a take permit under either Section 7 or 10 of the Federal Endangered Species Act. The take of any State Endangered Species (SE) or State Threatened Species (ST) requires a take permit under Section 2081 of the California Endangered Species Act. Species of Special Concern at the Federal and State level (FSC, SSC) have no special legal status and no special permits are required for the take or other impacts to such species. Further, the California Environmental Quality Act does not require any mitigation for the take of such species of special concern which is unique to such species unless "endangered, rare or threatened" under California Code of Regulations, Section 15380. None of the species of special concern listed in Table 3-4 are endangered, rare or threatened under Section 15380. "Take" is generally defined to include the harming or killing of a species, including any significant habitat modification that results in injury to the species.

3.3 JURISDICTIONAL AREAS

Although formal jurisdictional determinations were not conducted during the baseline biological surveys, general notations were made of areas potentially regulated by the USACE and CDFG. The location of water bodies or natural features within the Project Area possibly falling under the jurisdiction of the USACE and/or CDFG are shown in Exhibit 7.



Source: Michael Brandman Associates and PBS&J

NORTH

Michael Brandman Associates

05760012 · 12/2002

Exhibit 7

Jurisdictional Areas

THE PRESERVE · CHINO SUBAREA 2

4.0 MITIGATION IMPLEMENTATION PROGRAM

No State or Federally threatened or endangered species will be directly affected by implementation of the Chino Subarea 2 Specific Plan. The loss of agricultural lands above the 566-foot elevation line may adversely affect burrowing owls, foraging raptors, and migratory birds and waterfowl (sensitive wildlife species). Those mitigation measures listed in Section 5.4.6 of the RDEIR, as further detailed and implemented in the RMP, will mitigate the loss of those agricultural lands with habitat value and impacts to sensitive wildlife species by: (1) providing for open space land use designation on all 2,835 acres of Subarea 2 below the 566-foot inundation line (2) providing for the creation and perpetual maintenance of a 300-acre Conservation Area, on the project site or in nearby locations within the Prado Basin (including Chino Hills[2]); (3) the requirement for project-specific biological surveys; (4) the participation in enhancement and restoration programs for burrowing owl, raptor, and riparian habitats; (5) the creation of an urban buffer/transition area between planned development and wildlife habitat, and (6) the payment of mitigation fees assessed per adjusted gross acre of land that is developed.

4.1 SUMMARY OF ANTICIPATED IMPACTS

Impacts of the proposed project to biological resources are described in the Program EIR (RDEIR Section 5.4) and are briefly summarized below to provide the context for the mitigation implementation program that is detailed in this document.

4.1.1 Impacts to Biological Resources Above the 566 foot Elevation

The significant biological resource impacts of implementation of the proposed plan include direct loss of raptor foraging habitat, loss of burrowing owl habitat, loss of migratory bird and waterfowl habitat, and cumulative loss of certain agricultural lands with habitat value. These impacts are largely restricted to areas planned for development above the 566-foot inundation line, away from the most sensitive areas below the 566-foot line. Table 4-1 provides the acreage of each of the land cover types and associated plant communities located above the 566-foot inundation line affected by the proposed Specific Plan development.

[2] The term Prado Basin, as used herein, includes Chino Hills.

TABLE 4-1
PLANT COMMUNITIES AND LAND COVER TYPES AFFECTED BY PROPOSED DEVELOPMENT[1]

Plant Community	Land Cover Type										TOTAL
	Surface Water Areas			Agricultural Land							
	Detention Basins	Marsh	Open Water	Dairies	Pasture	Active Fields	Fallow Fields	Windrows	Riparian	Developed	
Disturbed	38			1,058	436	639			1	224	**2,396**
Non-Native Grassland				26	61	64				36	**187**
Southern Cottonwood-willow Riparian											**0**
Mulefat Scrub											**0**
Southern Willow Scrub											**0**
Coastal and Valley Freshwater Marsh											**0**
Open Water											**0**
Ornamental Woodland								17			**17**
Arundo Scrub											**0**
Coastal Sage Scrub											**0**
Area Totals (Acres)	**38**	**0**	**0**	**1,084**	**497**	**703**	**0**	**17**	**1**	**260**	**2,600[2]**

Notes: [1] All affected lands are located above the 566-foot inundation line.
[2] Only 1,256 acres provide any quality of habitat (see Section 4.1.1).

Most of the habitat above the 566-foot line is classified as disturbed (2,172 acres or 91%), developed (287 acres), non-native grassland (225 acres or 8%), and ornamental woodlands (17 acres, less than 1%) that are associated with agricultural activities. No significant impacts to sensitive plants and/or sensitive native plant communities are expected to occur. The loss of agricultural lands (pastures, windrows, and active and fallow fields) will result in the loss of 1,256 acres of land that provides, or may provide, varying qualities of roosting and foraging habitat for burrowing owl, other raptor species, and migration birds and waterfowl. An analysis by PCR (see Appendix C), which was included in the RDEIR, and a separate investigation by LSA (see Appendix D) concurred with the original analysis in the DEIR that this loss was not considered significant at a project level for the loss of raptor foraging habitat but could be considered a significant contribution to cumulative loss of this type of habitat on a regional basis. LSA analysis concluded that this potential cumulative loss will be mitigated to below the significant level with the proposed retention of land below the 566-foot inundation line in open space uses, combined with the creation of a 300-acre Conservation Area. LSA also corroborated the RDEIR conclusion that additional mitigation is required to reduce impacts to individual burrowing owl sites.

Dairy lands have not been included as suitable habitat for raptor species since most of the 1,084 acres occupied by dairies are principally stockyards devoid of all vegetation, heavily disturbed and covered with cow manure. Movement by wildlife is not expected to be impacted above the 566-foot line since such movement is restricted due to the intense dairy and agricultural activities, lack of viable water sources, and lack of native habitat.

4.1.2 Impacts to Biological Resources Below the 566-foot Elevation

Urban development is restricted below the 566-foot inundation line in the Project Area (with the exception of a 55-acre parcel that extends above Pine Avenue along the western boundary), so there will be no direct impacts to federal or state listed species, surface water and riparian habitats, or other sensitive species and/or habitats. The Specific Plan land use designations for all land below the 566-foot inundation line limits development likely to cause significant adverse impacts to biological resources and consist of Open Space-Recreation (OS-R), Agriculture (AG), Agriculture/Open Space-Natural (AG/OS-N) and Open Space-Natural (OS-N) uses.

The majority of the existing land uses below the 566-foot elevation consist of agricultural or recreational land use (i.e., Prado Regional Park and concessions). Areas of high biological sensitivity within the Chino Creek and Mill Creek floodways below the 543-foot elevation line have been classified by USACE as an extreme resource area. These areas include least Bell's vireo critical habitat areas and have been identified by the USACE as suitable only for extremely low-intensity use.

The proposed Specific Plan includes a 566-Foot Dam Inundation Elevation Overlay (DIO) applied to all lands below 566-foot inundation line. This overlay requires that all specific development proposals be submitted for review and comment by USACE, and further requires that allowable land uses comply with applicable provisions of any existing cooperative management plans that may apply to the Lower Chino Basin/Prado area. Finally, USACE has indicated that its master plan is being updated and will soon be released for land uses within the Prado Flood Control Basin. Under this plan, active recreation and intense agricultural uses, such as dairies, that have the potential to result in significant conflicts with sensitive biological resources will be carefully managed by USACE to avoid or minimize risks.

4.2 PROPOSED MITIGATION MEASURES

The following are the mitigation measures, verbatim, from the RDEIR. The following section (Section 4.3) details the actions that will be taken to provide for implementation of these measures.

B-1 Zoning and Land Use Regulation

1. All areas below the 566-foot dam inundation line, except such areas located north of Pine Avenue, will be retained within an open space or agricultural land use designation in order to provide protection for existing wildlife habitat values found in such areas and those to be created by the habitat enhancement activities described under mitigation B-3, below, as well as to avoid any new impacts.

2. Any new development or expansions of existing land uses within the open space designations of The Preserve Specific Plan (i.e., Agriculture, Agriculture/Open Space-Natural, Open Space-Recreation, Open space-Natural and Open Space-Water) shall comply with the requirements and provisions of the Resource Management Plan (see Mitigation No. B-3, below) in order to mitigate potential adverse project-specific impacts on biological resources.

B-2 Required Biological Studies

1. Conduct a biological assessment of each specific project site to characterize the habitat types and the potential for the site to support any sensitive species or habitat.

2. Where a sensitive species has the potential to occur, determine the level of potential for occurrence as low, moderate, or high. Provide scientific justification for this determination.

3. If the potential for occurrence is moderate or high (e.g., the required habitat elements for this species are present and/or there has been a sighting of this species in the vicinity of the project site), conduct focused surveys within suitable habitat to determine the presence or absence of the species on the project site.

4. Any surveys deemed necessary must be conducted by a biologist qualified to perform the needed survey(s). The City of Chino, or its consultant, will review and approve the personnel and methodology for any such proposed surveys.

5. If a sensitive species or habitat is found to occur on a proposed project site, or occupies habitat that may be impacted directly or indirectly by the proposed project, this must be called to the City's immediate attention and documented in the biological assessment for the project.

6. Mitigation measures to offset any potential impact to sensitive species and habitats must comply with the RMP and shall be included in the biological assessment. All lands set aside for conservation and/or other mitigation measures must be clearly documented in the final biological assessment.

B-3 Resources Management Plan

A Resources Management Plan (RMP) shall be prepared by the City of Chino to provide for the implementation of the mitigation measures described below, in order to avoid, lessen and reduce impacts on the biological resources within the Preserve Specific Plan Area. The Resources Management Plan will be approved by the Chino City Council at the time of certification of the Final EIR. The RMP will formalize the City's balanced approach to land use and resource management, and provides the framework for coordinating the City's actions with other agencies, such as County of San Bernardino, CDFG, USFWS, USACE, OCFWD, and OCWD with regard to specific conservation measures and resource management initiatives within The Preserve. The RMP will focus on establishing a Conservation Area and the development and implementation of wildlife habitat enhancement and restoration activities, primarily funded by a mitigation fee imposed on all urban development within the Project Area. The RMP will specifically address the following mitigation measures:

1. 300-acre Conservation Area

   Provision will be made for the creation, enhancement, expansion and perpetuation of high quality wildlife habitat in a 300-acre Conservation Area to be located generally below the 566-foot inundation line and within the boundaries of the Project Area. The more specific location of the Conservation Area will be determined through the preparation of the RMP and will depend on availability of such lands for mitigation purposes, and the suitability of land for the enhancements envisioned. Such habitat will be designed to address the impacts that will occur as the result of development of The Preserve (i.e., raptor, waterfowl and burrowing owl habitat). Key enhancements that will be provided comprise the following:

a) A weed removal program and replanting of native vegetation within the 300-acre Conservation Area shall be implemented to create high quality raptor and burrowing owl foraging habitat.

b) Installation and maintenance of twenty (20) artificial burrowing owl nesting sites to mitigate for the loss of burrowing owl habitat. Artificial nests will be located and designed to facilitate use by burrowing owls.

Stands of trees shall be planted at a minimum of five (5) locations within the 300-acre Conservation Area to mitigate for the loss of raptor nesting/foraging habitat. Specifics regarding enhancements (i.e., location of tree stands, placement of artificial owl burrows, plant and tree species, long-term maintenance and management, etc.) will be detailed in the RMP.

c) The City shall obtain agreements with the landowners in the 300-acre Conservation Area in the form of an irrevocable license, conservation easement, right of entry, or other legally enforceable instrument to install and maintain the above habitat enhancements and to provide the City with a perpetual right to control uses which would conflict with the land's use as wildlife habitat.

2. Alternate Location for the 300-acre Conservation Area

If the City is unable, or it is infeasible, to obtain the onsite mitigation agreements from property owners for all or a portion of the 300-acre Conservation Area, the City may acquire and enhance, or make other arrangements securing the right to permanently protect/preserve and enhance, land off-site within the Prado Basin (including Chino Hills). Such land must have similar biological value to land on-site within the areas planned for urban development (generally above the 566-foot elevation line). In addition, provisions shall be made to provide enhancements/restoration similar to the measure described in Section B-3(1), above.

3. Burrowing Owls

a) If burrowing owls are found on an individual development site, development, including the expansion of existing land uses or other land use activities that could disrupt the owls, will be required to follow the CDFG burrowing owl relocation protocols, including the creation of artificial burrows. Key components of this protocol presently include:

i. Occupied burrows should not be disturbed during the nesting season, from February 1 through August 31.

ii. If owls must be moved away from the disturbance area, passive relocation is preferable to trapping.

iii. A time period of at least one week is recommended to allow owls to move and acclimate to the alternate burrows.

iv. Passive relocation involves encouraging owls to move from occupied burrows to alternate natural or artificial burrows that are at least 50 meters from the impact zone with a minimum of 6.5 acres of suitable foraging habitat for each pair of relocated owls.

v. Owls should be excluded from burrows in the immediate impact zone and within a 50-meter buffer zone by installing one-way doors in burrow entrances.

vi. One-way door should be left in place for at least 48 hours to insure that owls have left the burrow before excavating the burrow.

vii. One alternate burrow (natural or artificial) should be provided for each burrow that will be excavating in the project impact zone.

viii. The Project Areas should be monitored daily for at least one week to confirm no owl use before excavating burrows in the immediate impact zone.

ix. When excavating burrows, hand tools should be used and the burrows should be refilled to prevent reoccupation.

x. Sections of flexible plastic pipe or burlap bags should be inserted into the tunnels during excavation to maintain an escape route for any animals that may still be located inside the burrow.

b) In order to provide supplemental mitigation beyond the standard CDFG protocol requirements for relocation of owls, the 300-acre Conservation Area will be made available for the relocation of burrowing owls that would be displaced by development, including the creation of 20 artificial burrows. The feasibility of relocating owls from development sites to the Conservation Area will be reviewed on a case-by-case basis for individual development projects, subject to the evaluation and recommendations of the biological survey prepared for a given site.

4. Urban Buffer/Transition Area

In order to limit urban intrusion into areas with habitat value that are below the 566-foot dam inundation line, a buffer area will be provided along the southern edge of urban development within The Preserve Specific Plan Project Area. The buffer will be designed to provide for limited access to habitat areas and will include provisions for the logical transition between urban structures/uses and habitat areas. Such provisions may address without limit measures regarding: location and type of land uses, lighting, vegetation, and tree plantings. Specific features regarding the design, conceptual location, buffer width and/or setback requirements,

timing and other features of the buffer shall be included as part of the Resources Management Plan.

While every reasonable effort will be made to seek such a buffer, this mitigation measure does not require land acquisition or obtaining any agreements with landowners in the form of an irrevocable license, conservation easement, right of entry, or other legally enforceable instrument for the purposes of providing the buffer, or for purposes of providing any of enhancements or features described under Mitigation Measure B-3(1).

5. Surface Water and Riparian Habitat

   a) All development will be required to satisfy any applicable requirements of USACE, Regional Water Quality Control Board and CDFG for Section 404 Clean Water Act permits and streambed alteration agreements.

   b) Drainage Area B (see Exhibit 7) will be designed 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. Specific features related to habitat values will be addressed as part of the RMP.

   c) A minimum of 10 acres of marsh and or riparian habitats shall be constructed in conjunction with drainage facilities and/or Natural Treatment Systems 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 water areas that support waterfowl.

6. 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 not practical, the developer shall provide for the replacement of the windrow trees in a manner supportive of raptor habitat. The biological survey prepared for the development project shall include an analysis by an ornithologist specializing in raptor biology. Such analysis shall include recommendations on the number of trees, tree specifications and location of replacement areas for windrows or stands of trees. The recommendations shall be based on biological values, as determined by the ornithologist, and in consultation with the City and the wildlife agencies. Replacement trees may be located within the 300-acre Conservation Area or other suitable areas located outside of the project site if consistent with the recommendations of the ornitholog0ist.

7. Agricultural Easements

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 actively pursue establishment of agricultural easements within The Preserve, pursuant to SB 831 and the Williamson Act Easement Exchange Program (WAEEP). 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.

8. Mitigation Fee

A mitigation fee shall be imposed on new development for the purpose of implementing the Biological Resource mitigation measures as described in the Resources Management Plan. The fee shall be adopted by the City Council prior to the issuance of grading permits for new residential, commercial, office, industrial development, or public facilities; provided grading permits may be issued prior to final adoption of the fee upon developer's deposit with the City of adequate cash or other form of security in excess of the proposed fee, as approved by the City Council for the City. The fee shall be structured to cover the estimated cost of the identified mitigation measures, including:

a) Costs associated with obtaining agreements for the 300-acre Conservation Area with landowners in the form of conservation easements or other legally enforceable instruments as described under mitigation measures B-3-1 and B-3-2, above;

b) Costs associated with the design, installation, and maintenance of the various enhancements and improvements described above, including such appropriate refinements/adjustments as may be identified by the RMP.

c) Administration, management and monitoring of the 300-acre Conservation Area and other mitigation measures as appropriate, including adaptive management.

Costs that form the basis for the mitigation fee may, at the discretion of the City, be defrayed through the use of grants or other government or private funding sources as such sources become available in the future.

Costs for wetlands/riparian enhancements shall be structured in conjunction with costs for such improvements that also serve water quality and drainage purposes, which may be funded by project drainage and/or water quality fees.

9. Participation in Regional Conservation Efforts

The City has had ongoing involvement with various regional conservation-related efforts. The City will continue to be involved in and coordinate with such efforts within The Preserve. These efforts include, without limitation:

a) USACE and Orange County Water District's Prado Basin Master Plan;

b) IEUA's Chino Creek Habitat Restoration Program;

c) Orange County Water District's Santa Ana River Watershed program;

d) USACE's Santa Ana River Mainstem Project;

e) Lower Chino Basin Working Group (Santa Ana River Working Group MOU) Resources Management Planning;

f) Chino Basin Center for Organic Materials (Santa Ana River Working Group MOU); Wildlife, Wetlands and Recreation Resource Conservation Program (Santa Ana River Working Group MOU);

g) Urban Transition Planning Smart Growth Program (Santa Ana River Working Group MOU);

h) Conjunctive Groundwater Management, Replenishment and Conservation Program (Santa Ana River Working Group MOU).

i) Chino Hills State Park General Plan (February 1999).

10. Administration and Monitoring

The City shall use a conservancy or land trust, or other similar, qualified entity to oversee and implement the Resources Management Plan and principally manage the 300-acre Conservation Area. Such an entity shall have expertise in the management of land and biological resources. The chosen entity may also jointly provide a similar function to adjacent jurisdictions, provided that effective implementation of the mitigation measures described herein can be achieved. The City Council shall use its best efforts to select and enter in to necessary agreements with the chosen entity prior to acquisition of any property through an irrevocable license, conservation easement, right of entry, or other legally enforceable instrument.

4.3 MITIGATION MEASURES, IMPLEMENTING ACTIONS

The following actions will be undertaken to implement the biological resources mitigation measures contained in the EIR for the Project Area.

4.3.1 Mitigation Measure B-1. Zoning and Land Use Regulations

A significant portion of Subarea 2 below the 566-foot line lies within the inundation area created by the raising of the Prado Dam. No new habitable structures will be allowed within this area to protect public health and safety from flood-related hazards. The majority of land is in OS-N (Open Space-Natural) or AG (Agricultural) and AG/OS-N (Agricultural/Open Space-Natural) areas that are protective of existing habitats and sensitive species (see Exhibit 4). Appendix E provides detailed descriptions of allowable uses under each of these designations. Creation of the urban buffer/transition area and implementation of the other RMP mitigation measures will provide further assurance that wildlife habitats associated with the agricultural and open space uses below the 566-foot inundation line will be adequately protected. The following paragraphs describe each of these proposed open space land use designations, land use designation enforcement responsibilities, and requirements for proposed changes in open space land use designation.

Agriculture Designation

Within the Project Area, total of 344 acres will be maintained in two separately designated Agricultural (AG) areas that will be available for most agricultural uses, including farming, stables, pastures, and grazing (see Exhibit 4). These two areas will also preserve a large block of open agricultural fields that will provide habitat for burrowing owls, raptors, and migratory birds and waterfowl above and below the 566-foot inundation line.

Agriculture/Open Space-Natural Designation

Another 518 acres have been designated as agricultural/open space-natural in the central portion of the Project Area just below the 566-foot line and will be available for migratory bird, agricultural, and open space uses, including passive recreation, equestrian uses, and conservation. Conservation values include potential habitat for burrowing owls, raptors, and migratory birds and waterfowl.

Open Space-Natural Designation

Riparian areas below the 543-foot elevation line have been designated Critical Habitat for the least Bell's vireo by USFWS. These areas along both Chino Creek and Mill Creek support known

populations of least Bell's vireo. In recognition of these underlying land use restrictions and the conservation value of these lands for federally listed biological species, 1,640 acres in the Project Area have been designated Open Space-Natural (OS-N). Natural drainages have also been included in the OS-N designations in recognition of critical biological resources within these areas. These areas will provide permanent natural open space and connect with the Santa Ana River system and provide connectivity for wildlife movement in the Prado Basin.

Open Space-Recreational Designation

Open space areas between Prado Lake and Pine Avenue and a narrow corridor running along the 566-foot inundation line have been designated Open Space–Recreational (OS-R). This designation is intended to establish open space areas for active and passive recreation as well as to provide open space for protection against environmental hazards such as flooding.

Zoning Enforcement Responsibility

Review of allowable uses and enforcement of land use designation provisions within the AG, AG/OS-N, OS-R, and OS-N designated areas of the Specific Plan is the responsibility of the Director of Community Development, or his/her designee. All proposed uses within these designated areas shall be evaluated by the City on a case-by-case basis for significant environmental impacts in accordance with California Code of Regulations (CEQA Guidelines) Sections 15162 and 15168.

Retention of Open Space Land Use Designations

Through the implementation of Mitigation Measure B-1, Zoning and Land Use Regulation, as detailed in this RMP, the City will retain all areas below the 566-foot inundation line (except such areas located above Pine Avenue) within an open space designation. This will provide for the protection of existing wildlife habitat values or those created by habitat enhancement activities, as well as to avoid any new impacts. However, if a change in land use designation is requested in the future, it would require a Specific Plan amendment and review for conformance with provisions of the RMP. Moreover, any future proposal to change a land use designation would require review of environmental impacts in compliance with CEQA.

Proposed Use Notification to U.S. Army Corps of Engineers

Land below the 566-foot line is within the Specific Plan Dam Inundation Elevation Overlay (DIO). This overlay requires all specific development proposals be submitted for USACE review, and that allowable land uses comply with provisions of any existing cooperative management plans developed

for the Lower Chino Basin/Prado area. If there are proposed uses, activities, or improvements that could affect USACE or federal land, the USACE may require compliance with provisions of the National Environmental Policy Act (NEPA). Compliance with land use designations, the DIO, as well as other applicable cooperative management plans, will ensure that future land uses within the area are carefully managed to avoid or minimize risks to sensitive biological resources.

Review of Land Use Applications Within Open Space Land Use Designation

Table 4-2 provides a checklist for City use in reviewing land use and permit applications within designated open space areas of the Specific Plan for conformance with provisions of the RMP.

TABLE 4-2
ZONING AND LAND USE REGULATIONS CHECKLIST

☐ Verify location of proposed use, improvement or activity within Specific Plan designated Open Space.
☐ Confirm proposed use as allowable open space use under Specific Plan and Section 20.11.030 of the Zoning Ordinance (see Appendix E).
☐ Verify jurisdictional authority of other public agencies, if any (i.e., USACE, San Bernardino County, etc.).
☐ Confirm compliance with Biological Study submittal requirements (EIR Mitigation Measure B-2 and RMP Table 4-3 Checklist).
☐ Identify location and proximity of proposed Open Space use, improvement or activity with respect to identified sensitive habitat areas. Sensitive habitat areas include, but may not be limited to the following: – High Sensitivity Areas identified in Program EIR Exhibit 5.4-2; – Least bell's vireo (LBV) Critical Habitat (below elevation of 543 feet); – Habitat of other federal- or State-listed Endangered and Threatened Species; – Riparian Woodland; – Conservation Areas(s) designated in the RMP; and – Burrowing owl relocation areas established pursuant to the RMP. Proposed improvements or the location of any land uses proposed to be changed from their current use shall be designed to avoid and/or minimize impacts to these areas.
☐ Verify location of proposed use with respect to Specific Plan Dam Inundation Overlay (DIO) and notify U.S. Army Corps of Engineers if included within DIO.
☐ Review proposed use, improvement or activity for compliance with applicable requirements of USACE, RWQCB and CDFG for Section 404 Clean Water Act permits and streambed alteration agreements.
☐ Review location of proposed use with respect to current ownership map and assessor's parcel information for OS designated areas below the 566-foot line; identify any additional agency and landowner notification requirements.
☐ Review proposed use, improvement or activity for conformance with other RMP checklist requirements and criteria.
☐ Review proposed use, improvement or activity status with respect to CEQA compliance; complete Environmental Checklist as necessary, and identify additional documentation requirements, if any.
☐ Evaluate need for special design requirements and/or setbacks for Open Space uses, improvements or activities proposed in proximity to identified sensitive habitat areas (e.g., within 100 feet).
☐ Prepare and adopt CEQA findings, as necessary.
☐ Process required City approvals and issue permit(s).

4.3.2 Mitigation Measure B-2. Required Biological Surveys

Further guidance in the implementation of RDEIR Mitigation Measure B-2 is provided as follows.

As part of submitting to the City a development application or a land use application that would result in a substantial change to the existing land use, an applicant/landowner shall conduct and submit a biological survey of the project site that briefly characterizes the habitat types and identifies the existence or the potential to occur of sensitive species (identified in Tables 3-3 and 3-4 as endangered or threatened). A biological survey and documenting report must provide the following information and analysis:

1. Conduct a biological survey of each proposed project site to characterize the habitat(s) present and the potential for the site to support sensitive plant and wildlife species.

2. If sensitive species have the potential to occur, rate the potential as low, moderate, or high. Provide scientific justification for this determination.

3. If the potential for occurrence is moderate or high (e.g., the required habitat elements for this species are present and/or there has been a sighting of this species in the vicinity of the project site), conduct focused surveys within suitable habitat to determine the presence or absence of the species on the project site. Focused surveys, if required, will follow established protocols by either USFWS or CDFG, when available.

4. Any focused surveys deemed necessary must be conducted by a USFWS and/or CDFG permitted biologist qualified to perform the needed survey(s). The City of Chino, or its consultant, will review and approve the personnel and methodology for any such proposed surveys.

5. If a sensitive species is found to occur on a proposed project site, or occupies habitat that may be impacted directly or indirectly by the proposed project, this must be called to the City's immediate attention and documented in the biological survey report for the project.

6. Mitigation measures to offset any potential impact to sensitive species and habitats must comply with the RMP and shall be included in the biological survey report. A take permit under either Section 7 or 10 of the Federal Endangered Species Act will be obtained prior to issuance of a grading permit, if a federally endangered or threatened species will be adversely impacted by a project. If the species is State Endangered or Threatened only, a consultation with CDFG will be required to determine ways to offset impacts to the species.

7. A wetlands permit under Section 404 of the Clean Water Act and a Streambed Alteration Agreement under CDFG code, if required, must also be obtained prior to issuance of a grading permit for any activity in a jurisdictional wetland.

8. All lands set aside for conservation and/or other mitigation measures in compliance with the RMP must be clearly documented in the final biological survey report.

9. Implementation of the mitigation measures set forth in B-3 to B-10 on a project-wide (Project Area) basis provide mitigation to offset project-wide impacts to species that are not listed as threatened or endangered by the USFWS or CDFG. Survey information identifying existence of any sensitive species shall be furnished to USFWS or CDFG for research collection. Additional mitigation may be required for any species which is defined as "endangered," "rare," or "threatened" in Section 15380 of the California Code of Regulations, depending on the adverse biological impacts to such species found as the result of subsequent, project-level, site-specific surveys and CEQA analysis.

Table 4-3 provides a checklist of these requirements for conducting biological studies as part of the development of the project application process.

TABLE 4-3
REQUIRED BIOLOGICAL SURVEYS CHECKLIST

☐	Conduct a biological survey of the project site and document habitat present, including surface waters and windrows.
☐	Determine potential for sensitive species to occur, including but not limited to: – Least Bell's vireo; – Southwestern willow flycatcher; – Yellow-billed cuckoo; and – Burrowing owls, raptors, and migratory birds and waterfowl.
☐	Determine potential for impacts to Waters of the U.S. or Waters of the State.
☐	Subcontract with a USFWS and/or CDFG permitted biologist qualified to perform any needed survey(s), if required.
☐	Conduct needed focused surveys during the following timeframes: Least Bell's vireo — April 10 – July 31 Southwestern willow flycatcher — May 5 – July 10 Yellow-billed cuckoo — May 5 – July 10 Burrowing owl — December 1 – January 31 or April 15 – July 15 Raptors — February 1 – August 31 Migratory birds and waterfowl — February 1 – August 31
☐	Conduct Jurisdictional Delineation on all potential Waters of the U.S. or Waters of the State, if needed.
☐	Determine if impacts to non-jurisdictional surface water and/or windrows on a project site require mitigation.
☐	Review potential impacts and recommended mitigation against conservation measures initiated in compliance with the RMP.
☐	Evaluate need for additional mitigation measures beyond those already initiated under the RMP.
☐	Prepare and submit technical reports for all biological surveys to the City as part of the application review process.

TABLE 4-3 (Cont.)
REQUIRED BIOLOGICAL SURVEYS CHECKLIST

☐	Acquire any needed take permits under the Federal Endangered Species Act and the California Endangered Species Act.
☐	If Waters of the U.S. are present, coordinate with USACE regarding need for Nationwide Permit.
☐	If Waters of the State are present, obtain a Streambed Alteration Agreement from CDFG.
☐	Prepare and adopt CEQA findings, as necessary.
☐	Process required City approvals and issue permit(s).

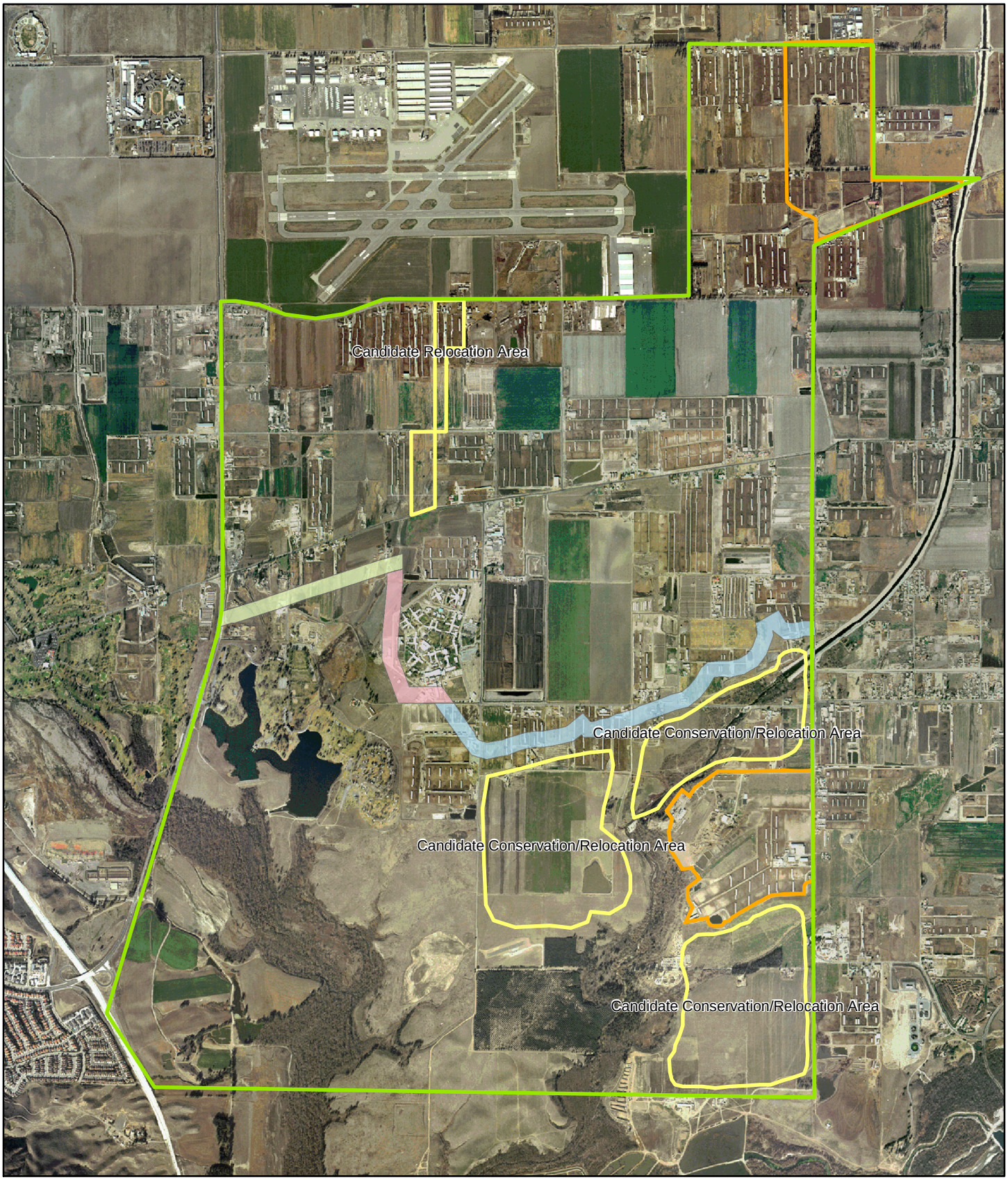
4.3.3 Mitigation Measure B-3. Resource Management Plan

Mitigation Measure B-3 (Resource Management Plan) called for the development of this RMP and specified several programs or mitigation measures be developed in order to address the following issues and to formalize the City's balanced approach to land use and resource management within The Preserve: 1) a 300-acre Conservation Area, onsite or offsite; 2) burrowing owls; 3) an urban buffer/transition area; 4) surface water and riparian habitat; 5) existing windrows; 6) agricultural easements; 7) a mitigation fee program; 8) participation in regional conservation efforts; and 9) program management. Additional implementation guidance is provided for each of these components below.

300-acre Conservation Area

Provisions will be made for the creation, enhancement, expansion and perpetuation of high-quality wildlife habitat in a 300-acre Conservation Area to be located within the Prado Basin with preference to a location generally below the 566-foot inundation line and within the boundaries of the Project Area. Exhibit 8 shows the general locations within the Project Area that have the greatest potential of being suitable for the Conservation Area. The 300-acre site will be selected according to the following criteria and obtained by the City of Chino through an agreement with the landowners in the form of a deed, an irrevocable license conservation easement right-of-entry, or other legally enforceable instrument. The purpose of the selected site will be to provide foraging and nesting habitat for raptor and migratory bird and waterfowl species that are consistent with the biological resource mitigation measures of the EIR. Candidate sites will be evaluated against the following criteria:

- Large, contiguous parcels of land;
- Preference given to location within the Project Area below the 566-foot dam inundation line. Alternatively, the Conservation Area could be established offsite within the Prado Basin if acquisition and control of the onsite Conservation Area cannot be secured in a timely, cost-effective manner as determined by the City;



Source: City of Chino, MBA

Exhibit **8**

Candidate Conservation Areas

Buffer/Transition Area
Flood Control Berm
Edison Corridor
Candidate Conservation and Relocation Area
Agricultural Zoned Area
Subarea 2 Boundary

0 1,250 2,500 5,000 Feet

NORTH

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- Willingness of landowners to allow their land to be used for conservation purposes;
- Agricultural land or natural open space with short, native or non-native grassland;
- Sites supporting natural habitats utilized by foraging raptors and/or migratory waterfowl such as riparian woodlands and oak woodlands;
- Extent of enhancements/restoration efforts needed to improve existing habitat values;
- Proximity to wildlife corridors; and
- Connectivity to regional open space.

The City shall complete a feasibility analysis of potential Conservation Areas identified in Exhibit 8, or, if these areas are determined to be infeasible or unavailable, a Conservation Area(s) offsite outside of the boundaries of the Project Area but within the Prado Basin, within 12 months of certification of the EIR. The feasibility study shall include costs and a timetable for securing Conservation Area(s). Offsite alternatives will be considered if the City finds potential onsite mitigation areas to be infeasible or if a proposed offsite alternative is available and is found to be environmentally superior based upon the above selection criteria.

A biologist experienced in conservation ecology will conduct a general biological survey of any site proposed by the City to determine the suitability of the site to serve as a Conservation Area. Based on the survey and criteria evaluation, the biologist will prepare a report documenting the site's suitability, specific recommended enhancement and restoration measures, other conservation activities needed for implementation consistent with the RMP and the EIR, and estimated costs associated with such measures or activities. The City will review this report and, if they concur with the assessment of the site and its suitability to serve as a Conservation Area, adopt a program for formally acquiring, enhancing, restoring, and managing the site. The City may involve federal, state, private land use, and/or conservation agencies in this program.

If the City selects a Conservation Area (onsite or offsite), and such area does not have all the requisite habitat characteristics necessary to mitigate impacts consistent with Mitigation Measures B-3(1) and B-3(2), other actions to address such impacts shall be implemented. Such actions may include the identification of other areas for specific mitigation including the enhancement/restoration of such areas. For example, if the selected Conservation Area(s) is located outside of the Project Area and is not viable to support burrowing owls including their relocation into such area, actions to ensure that the impacts to the burrowing owl are adequately addressed will also need to be implemented.

The City may ultimately transfer ownership and/or management responsibility for the property to a conservancy, land trust, or appropriate land management agency. Such an entity must have expertise in

the management of land and biological resources. Until the transfer of ownership or management responsibility occurs, the responsibility for management of the Conservation Area will remain with the City. Table 4-4 provides a checklist for needed items to identify and establish the Conservation Area.

TABLE 4-4
CONSERVATION AREA CHECKLIST

☐ Identify large, contiguous parcels of land within the Prado Basin meeting one or more of the following criteria: – Agricultural land or natural open space with short, native, or non-native grassland; – Site supporting native habitats such as riparian woodlands and oak woodlands; – Proximity to wildlife corridors; – Connectivity to regional open space; – Availability of the land for conservation purposes; and – Preference to feasible onsite areas within the 566-foot flood inundation area.
☐ Retain a biologist experienced with conservation ecology to conduct a general biological inventory of potential sites with emphasis on assessing the suitability to serve as a conservation site for foraging and nesting raptors and migratory bird and waterfowl species and to support regional wildlife movement.
☐ The biologist will prepare a technical report documenting his findings, evaluation, and recommendations on whether a property could serve as a Conservation Area based on the above criteria.
☐ Submit the biological report to the City of Chino for review and concurrence.
☐ Once an appropriate site is identified, the City will retain a conservation biologist to prepare implementing procedures specific to that site. Procedures will address all issues needed to ensure the site is permanently conserved and provides all necessary elements for supporting foraging or nesting raptors, migratory birds and waterfowl, and/or regional wildlife movement. Issues to be addressed should include: – Site description, such as location, physical features, and biological habitats; – Species presence; – Potential for site to support foraging or nesting raptor species, migratory birds, and/or regional wildlife movement; – Establish a biological monitoring program to document wildlife use of the site; and – Reporting requirements.
☐ Work with an existing agency or conservancy to establish a management program for the long-term management and maintenance of the Conservation Area.

Enhancement/Restoration

Once a Conservation Area(s) has been selected, provisions will be made for Enhancement/Restoration deemed necessary, based on the biologist's report and recommendations described in the preceding section. Given the extent of disturbance of the existing wildlife habitats throughout the Project Area, some level of Enhancement/Restoration is expected. However, the level of Enhancement/Restoration will vary depending on the characteristics of the selected site. A well-chosen site may not require much in the way of enhancements, although a high-quality site may not be able to meet all the required characteristics. If it is determined that little or no funding is needed for a particular site in the way of enhancements/restoration, funds apportioned for such purpose (see Section 4.5) may be used

for other enhancements/restoration activities within the Project Area that will be of benefit to biological resources within the Project Area.

A biologist/restoration specialist experienced in Enhancement/Restoration of riparian and upland habitats shall inspect a candidate site and prepare recommendations for habitat restoration and enhancement, if required, to correct identified habitat deficiencies. These recommendations shall consider and include, as needed:

- A weed removal program and replanting of native vegetation to create high-quality raptor foraging, burrowing owl nesting and foraging, and migrating bird and waterfowl habitats;
- Installation and maintenance of artificial burrowing owl nesting sites, if appropriate, to mitigate for the loss of burrowing owl habitat. Nesting sites will be located and designed to facilitate use by burrowing owls; and
- Planting stands of trees within the proposed Conservation Areas, if needed, to mitigate for the loss of raptor nesting/foraging habitat.

Table 4-5 provides a checklist for steps that should be implemented in order to establish what Enhancement/Restoration efforts may be needed.

TABLE 4-5
ENHANCEMENT/RESTORATION CHECKLIST

☐	Once a conservation site has been identified, the City will retain a biologist/restoration specialist to inspect the site and prepare Enhancement/Restoration recommendations specific to that site. Recommendations will address all improvements needed to a candidate site to ensure the site provides good quality habitat for both short-term and long-term occupation by burrowing owls, raptors, migratory birds, and other wildlife species as appropriate. Issues to be considered include: – A weed removal program and replanting of native vegetation to create high-quality raptor foraging, burrowing owl nesting and foraging, and migrating bird habitats; – Installation and maintenance of twenty (20) artificial burrowing owl nesting sites, if appropriate, to mitigate for the loss of burrowing owl habitat. Nesting sites will be located and designed to facilitate use by burrowing owls; and – Planting stands of trees within the proposed Conservation Areas to mitigate for the loss of raptor nesting/foraging habitat.
☐	Contract with a restoration, landscaping, or planting services company to implement needed Enhancement/Restoration efforts.
☐	The biologist/restoration specialist will monitor the installation of improvements for compliance with the Implementation Plan.
☐	Prepare an annual report for the first 5 years to document the successful implementation of the Enhancement/Restoration efforts.

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.

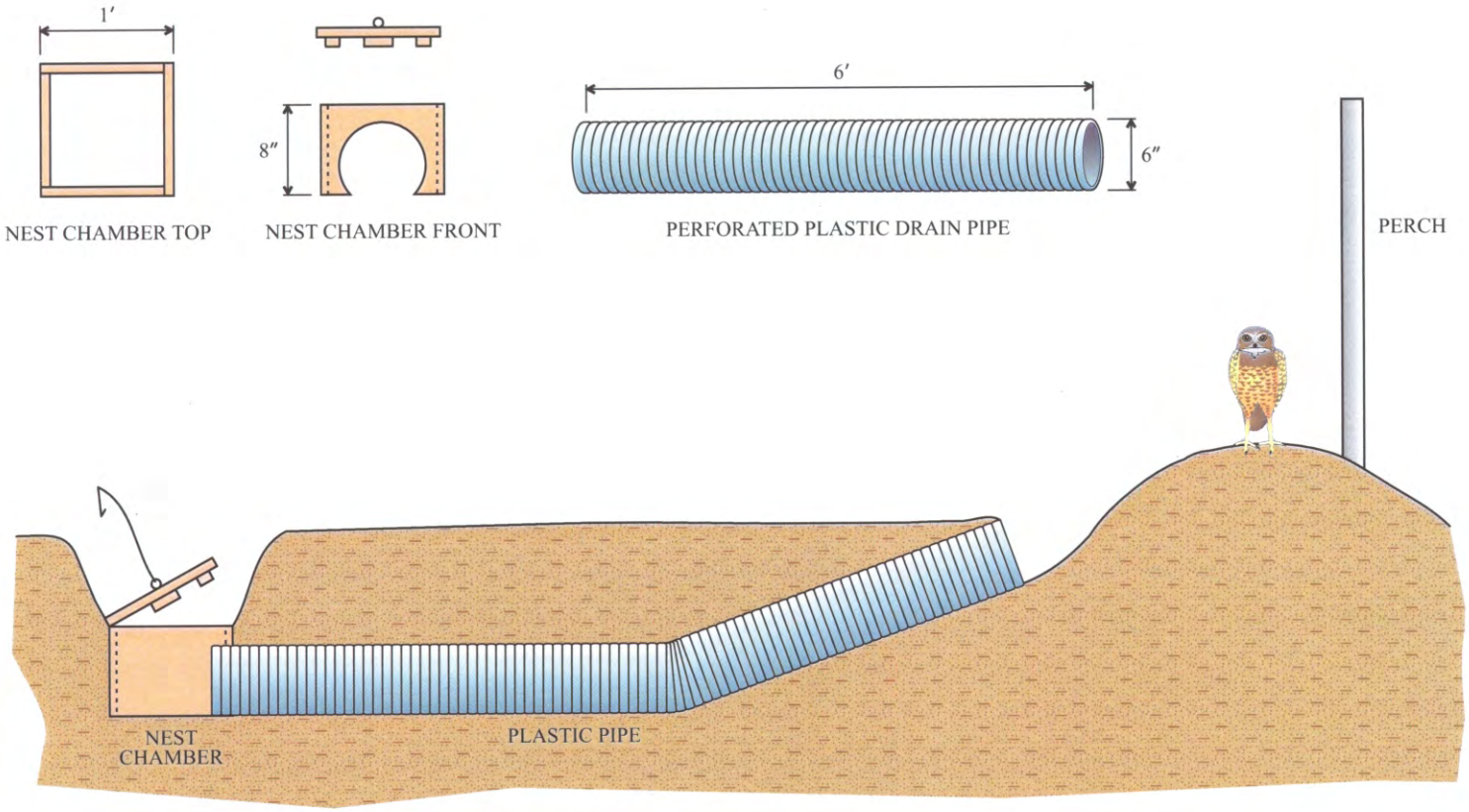

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Exhibit **9**

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.

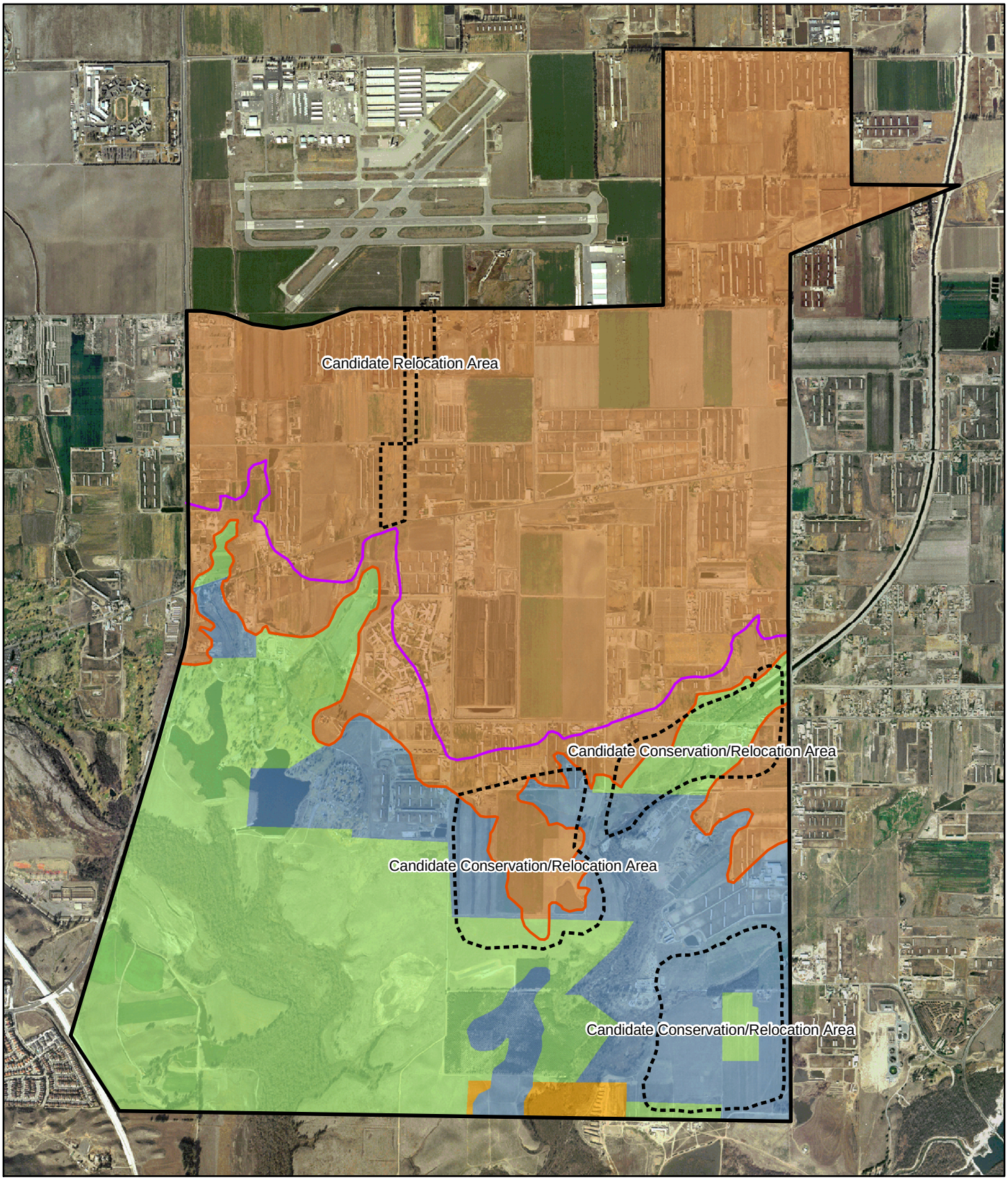
The other three candidate relocation areas are located in the southern part of the Specific Plan, below the 566-foot dam inundation area. One area is centered around the riparian and upland habitats associated with Mill Creek as it transitions into the Project Area along the east boundary. The site provides 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

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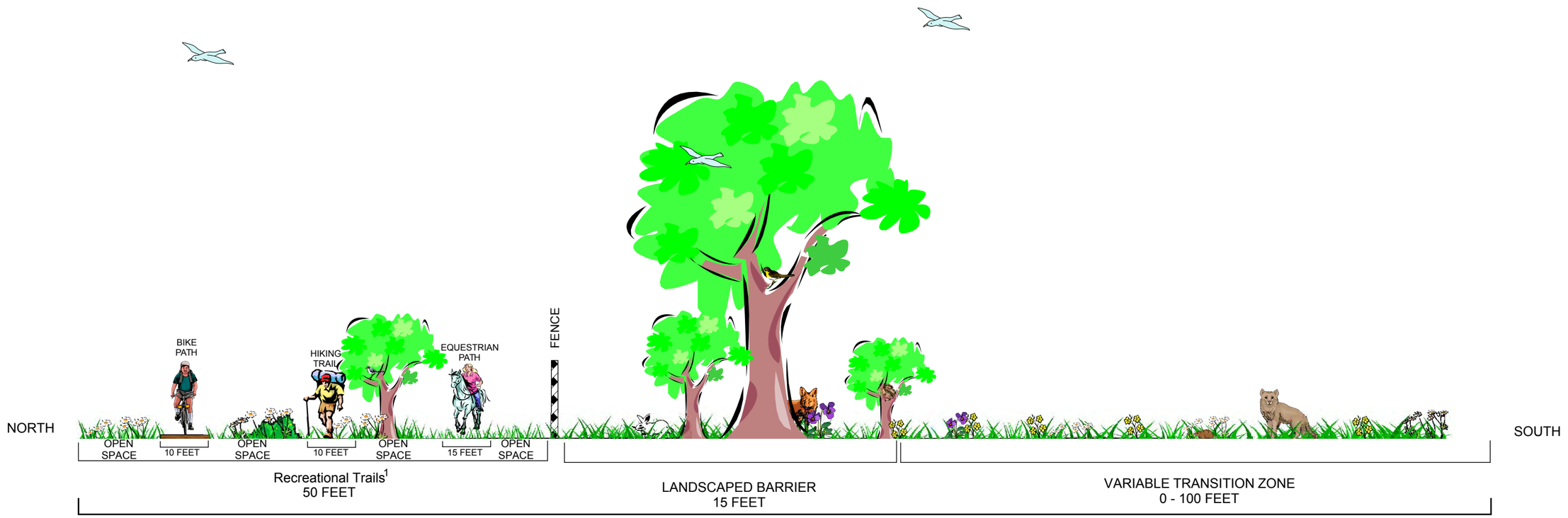
Specific features regarding design, conceptual location, buffer width and/or setback requirements, timing and other features of the buffer are described below.

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).

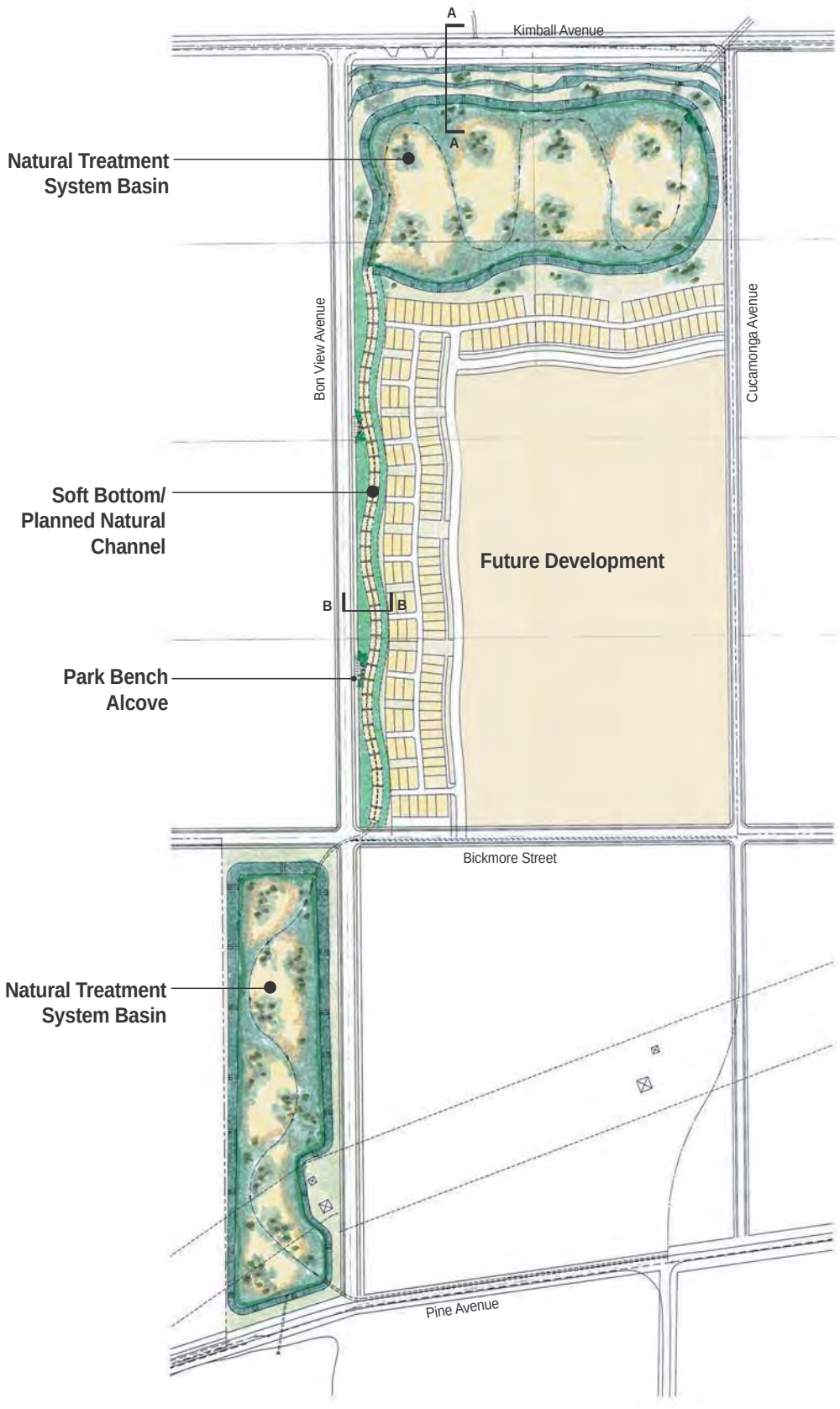
A restoration program will be designed for Drainage Area B (see Exhibit 7) to serve as a naturalized drainage course and enhanced to provide riparian habitat values, including plantings of appropriate native species of plants and trees. It is anticipated that these enhancements will be provided in conjunction 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.

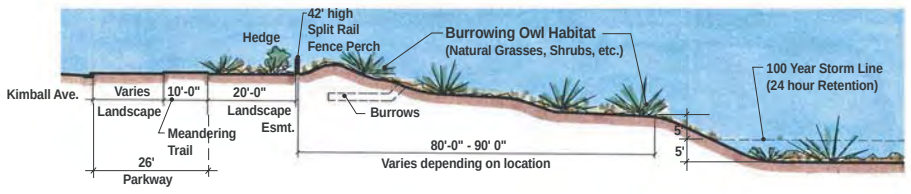
Table 4-7 lists requirements for identifying and mitigating potential impacts to surface waters.

TABLE 4-7
SURFACE WATERS CHECKLIST

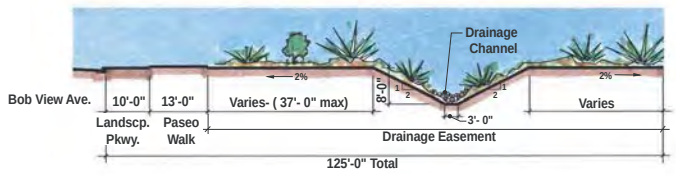
☐	All development applications will include in the general biological survey conducted for a proposed project, a review of surface waters on the project site.
☐	If it is determined that jurisdictional waters (Waters of the U.S. or Waters of the State) may be present, a jurisdictional delineation must 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
SCALE : 1"= 200'- 0"



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



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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6.0 LIST OF PREPARERS AND PARTICIPATING BIOLOGISTS

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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.

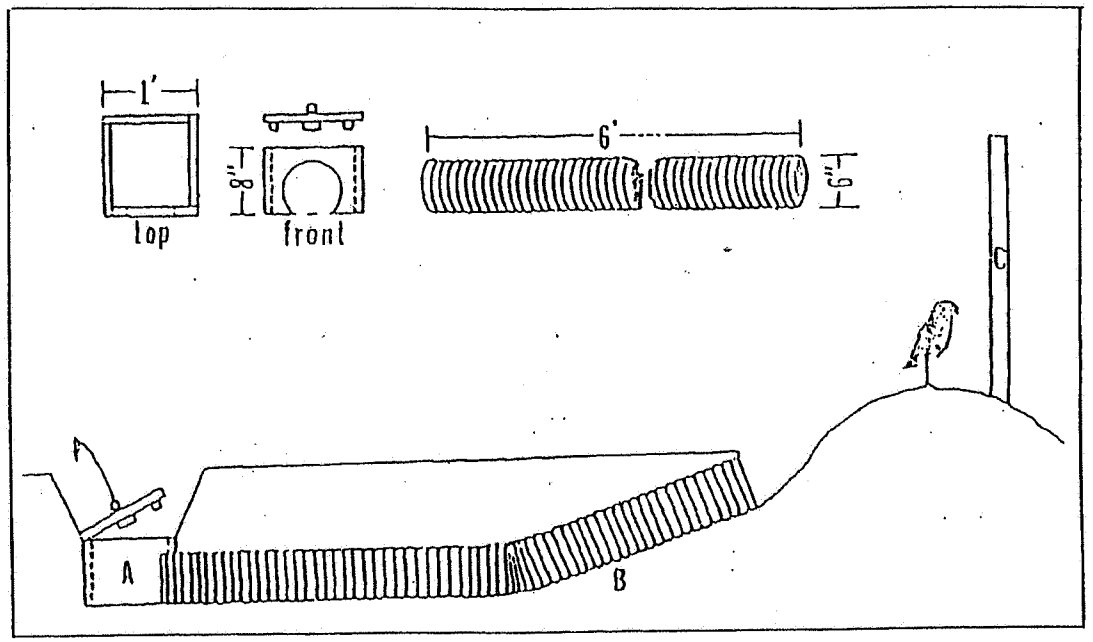

fig. 1 Artificial nest burrow design for burrowing owls Entire unit (including nest chamber) is burled 12" -- 18" below ground for maintaining thermal stability of the nest chamber. A= nest chamber, B = plastic pipe. C = perch.

APPENDIX G

SUGGESTED STEPS FOR INITIATING AN ACTIVE RELOCATION PROGRAM

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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
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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 43 06/27/01 Exhibit 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.