

APPENDIX A

NATURAL PLANT COMMUNITIES OCCURRING ONSITE

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Disturbed (Not included in Holland's descriptions)

In general, an area qualifies as "disturbed" if the total cover by vegetation is low (e.g., < 50%, pref. lower) and the relative cover by natives is lower still (e.g., < 40% = < 20% total cover). Presence of trash and debris piles or evidence of grading, trampling, equipment operations, stampede [sic], etc. should also be factored. This classification is not used interchangeably with the "ruderal" classification, which describes areas that consist predominantly of non-native weeds (e.g., >50% total cover with <10-20% rel. cover by natives).

This is the most common land cover found within Subarea 2. Types of disturbance found within the Project Area include, roads, structures, agriculture, dairy facilities, landfill, trails, parks, golf course, etc. This community also includes small, polluted dairy ponds. Approximately 3,501 acres or 64 percent of the Project Area qualifies as disturbed. This is due mainly to the presence of several dairies as well as other agricultural uses.

Non-native Grassland (42200)

Non-native grassland consists of a dense to sparse cover of annual grasses. It is often associated with numerous species of wildflowers, especially in years of heavy rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds.

Within the Project Area, there are a total of 1,013 acres (20%) of non-native grasslands, all below the 566-foot inundation line. Some of these areas were recently or historically used for agriculture or grazing and support very little diversity in vegetation. In the most southern portions of Subarea 2, where grazing has been eliminated, the non-native grassland is dotted with California buckwheat (*Eriogonum fasciculatum*) with a few random California sagebrush plants (*Artemisia californica*). Eventually, if left undisturbed, this area consisting of approximately 108 acres could transition into coastal sage scrub habitat.

Southern Cottonwood-Willow Riparian Forest (61330)

Tall, open, broadleafed winter-deciduous riparian forests dominated by Fremont cottonwood (*Populus fremontii*) and several tree willows. Understories usually are shrubby willows (*Salix spp.*). This community occurs in sub-irrigated and frequently overflowed lands along rivers and streams. Other common species include mugwort (*Artemisia douglasiana*), mulefat (*Baccharis glutinosasa*), wild cucumber (*Marah macrocarpus*) and stinging nettle (*Urtica holosericea*).

Two main drainages, Chino and Mill creeks, flow into the Prado basin through the southern end of the Chino project. The western portion of Chino creek contains dense riparian woodlands that are usually saturated with water year-round due to the Prado Dam. Due to the dense nature of this habitat, it is difficult to map where one habitat ends and the next begins. The riparian vegetation communities are estimations and account for approximately 234 acres or 4 percent of the available habitat.

Ornamental Woodland (Not included in Holland's descriptions)

Ornamental woodlands are human created woodlands using non-native trees and shrubs. Common species of trees found within ornamental woodlands in Southern California include various species of gum tree (*Eucalyptus* spp.), tamarisk (*Tamarix* spp.) and Peruvian pepper trees (*Schinus molle*). Ornamental woodlands present a challenge for species conservation. On one hand, they are comprised of non-native species that often out-compete native tree species, provide little or no food source for native fauna and are sometimes even poisonous to wildlife. On the other hand, these woodlands often provide excellent nesting habitat for raptors and other birds. The endangered southwester willow flycatcher and least Bell's vireo are known to nest in dense stands of tamarisk. Ornamental woodlands also provide shade, wind protection, erosion control and esthetic value to humans.

Within the Project Area, there are several small areas containing ornamental woodlands. These woodlands are mostly contained in the County park and the various scattered windrows, but account for approximately 224 acres of habitat (4%) within the Project Area.

Southern Willow Scrub (63320)

Dense broadleaved, winter-deciduous riparian thickets dominated by several willow species, with scattered emergent cottonwoods and sycamores (*Platanus racemosa*). Most stands are too dense to allow much understory development. Southern Willow Scrub is located in loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. This habitat, if not frequently flooded, will succeed into denser, more mature riparian habitats.

The two main drainages at the southern end of the Project Area contain varying degrees of southern willow scrub. There are also areas north of the 566-foot inundation line that support this habitat within the creeks. However, due to the dense nature of this habitat it is difficult to map where one habitat ends and the next begins. The estimated acreages for this plant community are approximate and account for approximately 144 acres or 2.6 percent of the available habitat.

Open Water (Not included in Holland's descriptions)

"Open water" are areas within riparian habitats which contain little or no vegetation, but have constant flow of water. These areas are used as foraging and stopping points for migrating and resident waterfowl and raptors. Areas within the Project Area containing open water include Prado Lake and the upper portion of Mill Creek, a few large dairy ponds and some small areas within Chino creek. Smaller dairy ponds, which offer little or no value to wildlife, are classified under disturbed. The total area of open water within the Project Area is 84 acres.

Mule Fat Scrub (63310)

A tall, herbaceous riparian scrub strongly dominated by Mulefat (*Baccharis viminea*). This community is often an early successional stage of other riparian forest or woodland communities and is maintained by frequent flooding. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodlands, especially under heavy grazing.

Within the Project Area, this habitat can be found intermittently within other riparian communities below the 566-foot inundation line and is estimated to cover approximately 45 acres (1%) of the Project Area.

Arundo Scrub (not included in Holland's descriptions)

This community is completely dominated by the introduced giant reed (*Arundo donax*). This hearty perennial grass can form impenetrable forests 30 feet high in any regularly wet area. The plant prefers low-gradient riparian areas, but can be found in almost any type of moist habitat. It is thought that this plant originated in India, before it was introduced to Europe. It was brought to America in the late 1700s or early 1800s for roofing material. This plant has now invaded sensitive habitats throughout the world. This community completely displaces native vegetation and wildlife if left unmanaged.

A large stand, approximately 45 acres (1%), of Arundo scrub can be found in Mill Creek below the 566-foot inundation line. It is presumed that there may also be smaller areas within Chino Creek riparian areas that contain this invasive species.

Coastal and Valley Freshwater Marsh (52410)

This community is dominated by perennial, emergent monocots. Often forming completely closed canopies. These marshes are found in areas with slow-moving water, and often permanently flooded by fresh water (rather than brackish, alkaline, or variable). Prolonged saturation permits accumulation of deep, peaty soils. Characteristic species include cattails (*Typha Domingensis* or *T. Latifolia*), sedges (*Cyperus* spp.), and tules (*Scirpus* spp.). This habitat is found along the coast and coastal valleys near river mouths and at the edges of lakes, springs and rivers. It has been greatly reduced due to development.

Within the Project Area, this habitat can be in the western portions found within the riparian habitat along Chino creek below the 566-foot inundation line. There are approximately 37 acres (1%) of this plant community occurring within the Project Area.

APPENDIX B

PLANT AND WILDLIFE SPECIES OBSERVED ONSITE

APPENDIX B

Plant Species Observed Onsite

Scientific Name	Common Name
Angiosperms (Dicotyledonae)	
ANACARDIACEAE	SUMAC OR CASHEW FAMILY
<i>Toxicodendron diversilobum</i>	Poison oak
APIACEAE	CARROT FAMILY
<i>Conium maculatum</i>	Poison hemlock
ASTERACEAE	SUNFLOWER FAMILY
<i>Ambrosia psilostachya</i>	Western ragweed
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis salicifolia</i>	Mule fat
<i>Cirsium vulgare</i>	Bull thistle
<i>Euthamia occidentalis</i>	Western goldenrod
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Isocoma menziesii</i>	Coastal goldenbush
<i>Silybum marianum</i>	Milk thistle
<i>Sonchus oleraceus</i>	Common sow thistle
<i>Stephanomeria virgata</i>	Twiggy wreathplant
BORAGINACEAE	BORAGE FAMILY
<i>Amsinckia</i> sp.	Fiddle neck
<i>Cryptantha</i> sp.	Cryptantha
BRASSICACEAE	MUSTARD FAMILY
<i>Brassica nigra</i>	Black mustard
<i>Hirshfeldia incana</i>	Short-podded mustard
<i>Lepidium latifolium</i>	Peppergrass
CACTACEAE	CACTUS FAMILY
<i>Opuntia ficus-indica</i>	Indian-fig
<i>Opuntia littoralis</i>	Coastal prickly pear
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium album</i>	Lamb's-quarter
<i>Chenopodium murale</i>	Nettle-leaved goosefoot
<i>Salsola tragus</i>	Russian thistle
CRASSULACEAE	STONECROP FAMILY
<i>Crassula erecta</i>	Dwarf stonecrop
<i>Dudleya lanceolata</i>	Lance-leaved dudleya
CONVOLVULACEAE	MORNING-GLORY FAMILY
<i>Calystegia macrostegia</i>	Morning-glory
CUSCUTACEAE	DODDER FAMILY
<i>Cypripedium</i> spp.	Cypress
EUPHORBIACEAE	SPURGE FAMILY
<i>Chamaesyce albomarginata</i>	Rattlesnake weed
<i>Eremocarpus</i> sp.	Doveweed
<i>Ricinus communis</i>	Castor-bean

Plant Species Observed Onsite (Cont'd)

Scientific Name	Common Name
FABACEAE	PEA FAMILY
<i>Lupinus sp.</i>	Lupine
<i>Medicago polymorpha</i>	California bur-clover
<i>Melilotus alba</i>	White sweetclover
GERANIACEAE	GERANIUM FAMILY
<i>Erodium cicutarium</i>	Red-stemmed filaree
<i>Geranium sp.</i>	Geranium
LAMIACEAE	MINT FAMILY
<i>Marrubium vulgare</i>	Horehound
MALVACEAE	MALLOW FAMILY
<i>Malva parviflora</i>	Cheeseweed
MYRTACEAE	MYRTLE FAMILY
<i>Eucalyptus globoratum</i>	Eucalyptus (Blue gum)
<i>Oenothera elata</i>	Evening primrose
OLEACEAE	OLIVE FAMILY
<i>Fraxinus sp.</i>	Olive
PINUS	PINE FAMILY
<i>Pinus spp.</i>	Pine
POACEAE	GRASS FAMILY
<i>Avena sp.</i>	Wild Oat
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat
PLATANACEAE	SYCAMORE FAMILY
<i>Platanus sp.</i>	Sycamore
PRIMULACEAE	PRIMROSE FAMILY
<i>Anagallis arvensis</i>	Scarlet pimpernel
RUBIACEAE	MADDER FAMILY
<i>Gallium angustifolium</i>	Narrow-leaved bedstraw
SALICACEAE	WILLOW FAMILY
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont's cottonwood
<i>Populus trichocarpa</i>	Black cottonwood
<i>Salix gooddingii</i>	Black willow
<i>Salix hindsiana</i>	Sandbar willow
<i>Salix laevigata</i>	Red willow
<i>Salix lasiolepis</i>	Arroyo willow
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i>	Jimson weed
<i>Nicotiana glauca</i>	Tree tobacco
<i>Solanum douglasii</i>	Douglas' nightshade
VITACEAE	GRAPE FAMILY
<i>Vitis girdiana</i>	Desert wild grape

Plant Species Observed Onsite (Cont'd)

Scientific Name	Common Name
Angiosperms (Monocotyledons)	
POACEAE	GRASS FAMILY
<i>Arundo donax</i>	Giant reed
<i>Bromus diandrus</i>	Ripgut brome
<i>Bromus hordeaceus</i>	Softchess
<i>Bromus madritensis</i> ssp.	Red brome
<i>Distichlis spicata</i>	Saltgrass
<i>Hordeum vulgare</i>	Barley

APPENDIX B

Wildlife Species Observed Onsite

Scientific Name	Common Name
Class Amphibia	Amphibians
BUFONIDAE	TRUE TOADS
<i>Bufo boreas halophilus</i>	California toad
Class Reptilia	Reptiles
COLUBRIDAE	SNAKES
<i>Thamnophis hammondi</i>	Two-striped garter snake
Class Aves	Birds
ARDEIDAE	HERONS
<i>Ardea herodias</i>	Great blue heron
<i>Ardea alba</i>	Great egret
<i>Butorides virescens</i>	Green heron
<i>Egretta thula</i>	Snowy egret
THRESKIORNITHIDAE	IBISES AND SPOONBILLS
<i>Plegadis chihi</i>	White-faced ibis
CATHARTIDAE	AMERICAN VULTURES
<i>Cathartes aura</i>	Turkey vulture
CIRCINAE	HARRIERS
<i>Circus cyaneus</i>	Northern harrier
ACCIPITRIDAE	HAWKS
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Elanus leucurus</i>	White-tailed kite
<i>Falco mexicanus</i>	Prairie falcon
<i>Falco sparverius</i>	American kestrel
ANATIDAE	WATERFOWL
<i>Anas acuta</i>	Northern pintail
<i>Anas platyrhynchos</i>	Mallard
<i>Branta Canadensis</i>	Canada goose
ALAUDIDAE	LARKS
<i>Eremophila alpestris actia</i>	California horned lark
CHARADRIIDAE	PLOVERS
<i>Charadriidae vociferous</i>	Killdeer
COLUMBIDAE	PIGEONS & DOVES
<i>Columba livia</i>	Rock dove
<i>Columbina passerina</i>	Common ground-dove
<i>Zenaida macroura</i>	Mourning dove
TYTONIDAE	BARN OWLS
<i>Tyto alba</i>	Barn owl
STRIGIDAE	TRUE OWLS
<i>Speotyto cunicularia</i>	Burrowing owl

Wildlife Species Observed Onsite (Cont'd)

Scientific Name	Common Name
TROCHILIDAE	HUMMINGBIRDS
<i>Archilochus alexandri</i>	Black-chinned hummingbird
<i>Calypte anna</i>	Anna's hummingbird
<i>Selasphorus</i> sp.	Rufous/Allen's-type hummingbird
ALCEDINIDAE	KINGFISHERS
<i>Ceryle alcyon</i>	Belted kingfisher
PICIDAE	WOODPECKERS
<i>Colaptes auratus</i>	Northern flicker
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Sayornis nigricans</i>	Black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Tyrannus verticalis</i>	Western kingbird
VIREONIDAE	VIREOS
<i>Vireo gilvus</i>	Warbling vireo
HIRUNDINIDAE	SWALLOWS
<i>Hirundo pyrrhonota</i>	Cliff swallow
TURDIDAE	THRUSHES
<i>Catharus ustulatus</i>	Swainson's thrush
CORVIDAE	JAYS & CROWS
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	Common raven
TIMALIIDAE	BABLRES
<i>Chamaea fasciata</i>	Wrentit
MIMIDAE	THRASHERS
<i>Mimus polyglottos</i>	Northern mockingbird
PTILOGONATIDAE	SILKY-FLYCATCHERS
<i>Phainopepla nitens</i>	Phainopepla
LANIIDAE	SHRIKES
<i>Lanius ludovicianus</i>	Loggerhead shrike
STURNIDAE	STARLINGS
<i>Sturnus vulgaris</i>	European starling
PARULIDAE	WOOD WARBLERS
<i>Dendroica coronata</i>	Yellow-rumped warbler
<i>Dendroica petechia</i>	Yellow warbler
<i>Wilsonia pusilla</i>	Wilson's warbler
ICTERIDAE	BLACKBIRDS, MEADOWLARKS AND ORIOLES
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Icerus cucullatus</i>	Hooded oriole
<i>Molothrus ater</i>	Brown-headed cowbird
<i>Sturnella neglecta</i>	Western meadowlark
FRINGILLIDAE	FINCHES
<i>Carduelis lawrencei</i>	Lawrence's goldfinch
<i>Carpodacus mexicanus</i>	House finch

Wildlife Species Observed Onsite (Cont'd)

Scientific Name	Common Name
PLOCEIDAE	WEAVER FINCHES
<i>Passer domesticus</i>	House sparrow
Class Mammalia	Mammals
LEPORIDAE	HARES & RABBITS
<i>Lepus californicus bennettii</i>	Sand Diego black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	Desert cottontail
SCIURIDAE	SQUIRRELS
<i>Spermophilus beecheyi</i>	California ground squirrel
CANIDAE	WOLVES
<i>Canis familiaris</i>	Domestic dog
<i>Canis latrans</i>	Coyote
GEOMYIDAE	POCKET GOPHERS
<i>Thomomys bottae</i>	Botta's pocket gopher
MURIDAE	MICE, RATS, & VOLES
<i>Mus musculus</i>	House mouse
<i>Peromyscus maniculatus</i>	Deer mouse
<i>Reithrodontomys megalotis</i>	Western harvest mouse
MUSTELIDAE	WEASELS, SKUNKS & OTTERS
<i>Mephitis mephitis</i>	Striped skunk
FELIDAE	CATS
<i>Felis catus</i>	Domestic cat
<i>Lynx rufus</i>	Bobcat
CERVIDAE	DEER
<i>Odocoileus hermionus</i>	Mule deer

APPENDIX C

PCR'S REGIONAL RAPTOR HABITAT ASSESSMENT



Memorandum

TO: Bob Prasse, City of Chino
CC:
FROM: Steve Nelson,
PCR Services Corporation
RE: **THE PRESERVE RAPTOR FORAGING HABITAT ASSESSMENT**

DATE: July 26, 2002

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;

Memorandum

RE: THE PRESERVE RAPTOR FORAGING HABITAT ASSESSMENT



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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 overlaid 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*.

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RE: THE PRESERVE RAPTOR FORAGING HABITAT ASSESSMENT



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

*(acres 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 2 Above 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

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

Source: PCR Services Corporation and MBA 2002.

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RE: THE PRESERVE RAPTOR FORAGING HABITAT ASSESSMENT



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.

APPENDIX D

**LSA'S ASSESSMENT OF IMPACT AND MITIGATION OPTIONS:
THE PRESERVE, CHINO**

December 20, 2002

Ms. Jeanne Cockrell
Lewis Operating Corp.
1156 Mountain Avenue
P.O. Box 670
Upland, California 91785-0670

Subject: Assessment of Impact and Mitigation Options: The Preserve, Chino

Dear Ms. Cockrell:

LSA Associates, Inc. (LSA) has been retained by Lewis Operating Corp. (Lewis) to evaluate the analysis of impacts to biological resources and proposed mitigation options described in the Partial Recirculation of the Draft EIR for The Preserve (Chino Subarea 2) project, in Chino, California. Specifically, LSA is focusing on the impacts to potential raptor foraging habitat and the adequacy of the proposed mitigation. LSA's analysis is based on a field overview of the project area conducted on June 1, 2002; inspection of an aerial photograph provided by L.D. King, Inc.; ground level photographs of portions of the project and adjacent areas taken by LSA on December 11, 2002; and the Partial Recirculation of the Draft EIR (August 2002). LSA's opinion is also based on its experience as professional preparers of California Environmental Quality Act (CEQA) documentation throughout the State of California.

BIOLOGICAL VALUES OF EXISTING HABITATS

For this type of evaluation, it is important to understand the biological values of existing habitats in the project area, as well as other raptor foraging habitat in the region. LSA photographed and evaluated typical examples of several categories of land as mapped by Michael Brandman Associates (MBA) for the Draft EIR. (See Figures 1 through 6.)

Dairies

This is the single largest land cover type within The Preserve, totaling 1,436 acres. Approximately 1,084 acres are located above the 566-foot inundation line. Based on LSA's field review and inspection of the aerial photograph, this acreage represents quite intensive, "feedlot" type operations, with developed milking facilities and extensive areas covered deeply by manure (Figures 2a and 2b). Very little vegetation, especially native vegetation, occurs in these areas, and these areas do not provide valuable wildlife habitat.

Pasture

Areas that are called "pasture" in the DEIR appear to be integral parts of dairy operations and have somewhat more vegetative cover than the feedlot areas but little native vegetation (Figures 3a and 3b). Approximately 496 acres of pasture exist above the 566-foot inundation line. These areas have

similar characteristics to some of the cultivated and fallow fields but are generally smaller areas that are more immediately adjacent to the intensive dairy operations. These pastures provide some foraging area, although they are generally not extensive, and most suitable for smaller, common species, such as the American kestrel.

Active Fields

There are 703 acres of active agricultural fields above the 566-foot inundation line. These fields appear to be disced regularly, followed by the planting of crops (often alfalfa). There are certainly portions of this cycle (such as when crops are growing or immediately after harvest) during which these areas provide habitat for foraging birds, including raptors (Figure 4). However, after the fields have been disced and before planting, their habitat value is limited.

Fallow Fields

These fields, as mapped by MBA, are disturbed much less often than the active fields and pastures described above. Less than one acre of fallow fields exist above the 566-foot inundation line. The remaining 545 acres located below the 566-foot line are more expansive and more removed from the intensive agricultural operations (Figure 5). Consequently, they can develop a larger small mammal population and provide higher habitat value for raptors, as well as a variety of insectivorous and seed eating birds. These fallow fields below the 566-foot line are not proposed for urban development but are zoned as open space or agricultural lands.

Annual Grassland

There are no substantial amounts of annual grasslands within the project area, and this is not one of the land cover types mapped for the Draft EIR. There are still considerable amounts of this habitat type within Chino Hills, both in Chino Hills State Park and on privately held, undeveloped land in the vicinity of the Park and the project area (Figure 6). Strictly speaking, this is not a native habitat type, due to dominance in most cases by nonnative annual grasses. However, it is considered a "naturalized" habitat type that possesses many of the habitat attributes of the native grasslands that were once common in California. Annual grassland typically supports relatively high small mammal populations and is considered one of the most valuable habitat types for raptor species.

ASSESSMENT OF PROJECT IMPACTS AND MITIGATION: RAPTOR FORAGING HABITAT

LSA concurs with the analysis of impacts to raptor habitat provided by PCR that is included in the partial recirculation of the Draft EIR. The feedlot type dairy operations should not be considered suitable raptor foraging habitat, and loss of these areas should not be considered significant. The approximately 1,200 acres of pasture, active fields, and fallow fields above the 566-foot elevation line provide some value for raptor foraging. However, LSA would not consider the loss of this area to be significant at the project level for three reasons: 1) the habitat is of limited value; 2) the amount of habitat is a relatively small percentage of the overall habitat available in the region, as described by PCR; and 3) the habitat loss should be considered with respect to its overall value within the project

area, i.e., a larger area (approximately 1,525 acres) of significantly higher habitat value will be preserved in the project area.

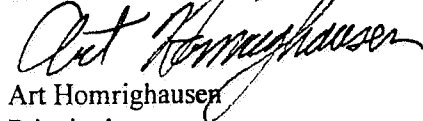
LSA would agree that the loss of the agricultural land (other than the dairy operations) would be considered a contribution to cumulative loss of this type of habitat in the region, which would have a significant effect on the environment. Obviously, this type of impact is directly related to loss of agricultural land and/or open space, which cannot be offset by the creation of new land. The only feasible mitigation for this type of cumulative habitat loss is to protect against the loss of a reasonable amount of similar land types. For example, the Multi-Species Conservation Plan (MSCP) in San Diego County calls for long-term preservation of 0.5 acre of grassland for every acre impacted, which would theoretically result in the preservation of one-third of the available grassland in the planning area. This approach was approved by the County of San Diego, the U.S. Fish and Wildlife Service, and California Department of Fish and Game (CDFG) through the EIS/EIR for the MSCP, and CDFG frequently recommends the same preservation to development ratio in its comments on other projects in Southern California. This recommended preservation of one-third of potential raptor foraging habitat can be compared with The Preserve project, which will preserve a higher percentage (56 percent) of habitat that is far less valuable than the annual grassland in the San Diego MSCP. The zoning overlay by the City to provide assurance of long-term open space preservation (with agricultural or other uses that are no more intensive than current uses in this open space) could be considered adequate mitigation for the project's contribution to cumulative impacts to existing raptor foraging habitat. The 300-acre conservation area identified in the Draft EIR provides valuable additional mitigation, by either adding habitat value to the on-site preservation area or providing up to 300 acres of high-quality off-site preservation area. In either case, the retention of land below the 566-foot inundation line in agricultural and open space uses, combined with the 300-acre conservation area, should be considered more than adequate mitigation for the loss of 1,200 acres of agricultural land that provides some raptor foraging habitat of marginal value. Of course, as noted in the Draft EIR, additional mitigation is required to reduce impacts to individual burrowing owl sites.

CONCLUSION

The Recirculated Draft EIR's analysis of impacts to raptor foraging habitat and the identification of feasible mitigation measures are appropriate and consistent with other projects in the region. The acknowledgment that there will remain significant impacts to raptor foraging habitat and burrowing owls after mitigation is quite conservative and is based on the inescapable fact that there will be a net loss of habitat in the project area.

Sincerely,

LSA ASSOCIATES, INC.



Art Homrighausen
Principal

Attachments: Figures



Photo 1. Dairy operation. View to the south.

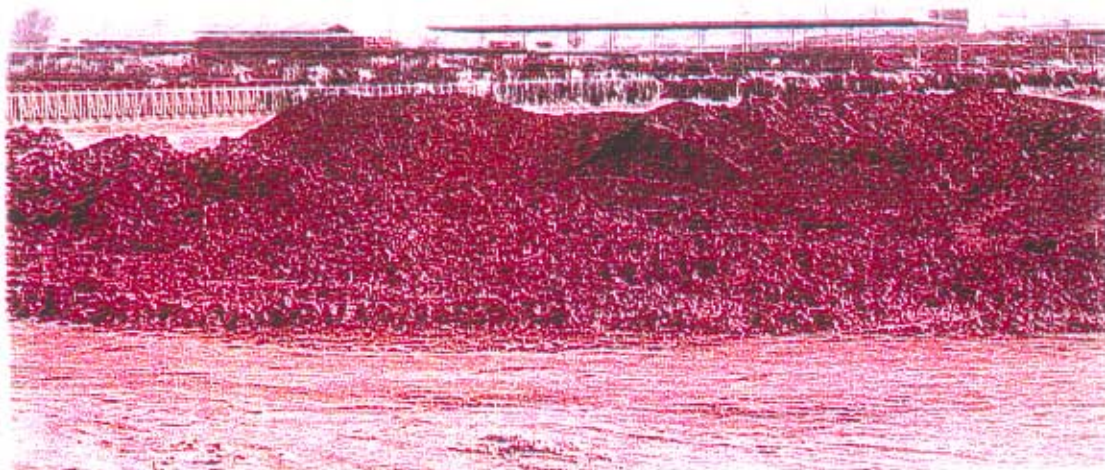


Photo 2. Dairy operation. View to the northeast.

LSA

FIGURE 2A

Chino Reserve
Site Photographs

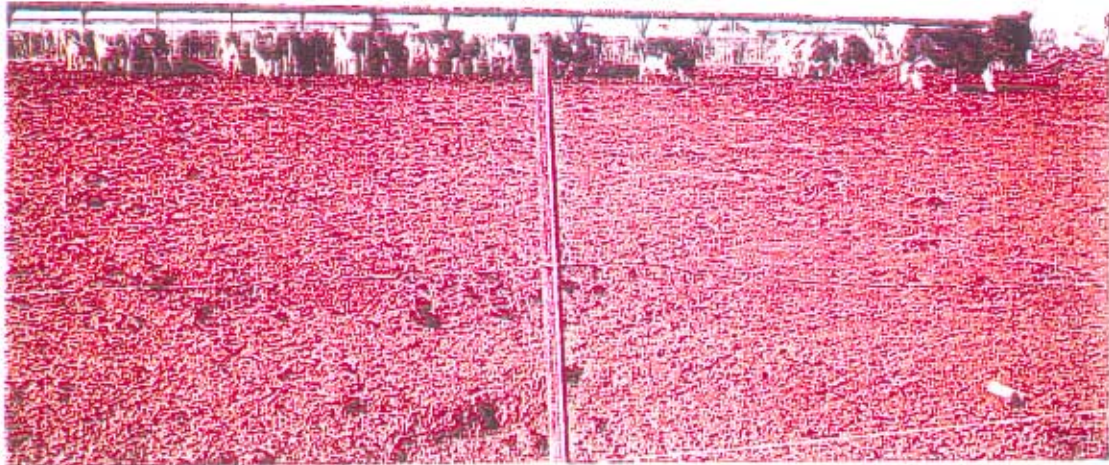


Photo 3. Dairy operation. View to the west.



Photo 4. Dairy operation. View to the east.

LSA

FIGURE 2B

Chino Reserve
Site Photographs



Photo 5. Pasture. View to the southwest.



Photo 6. Pasture. View to the southeast.

LSA

FIGURE 3A

Chino Reserve
Site Photographs

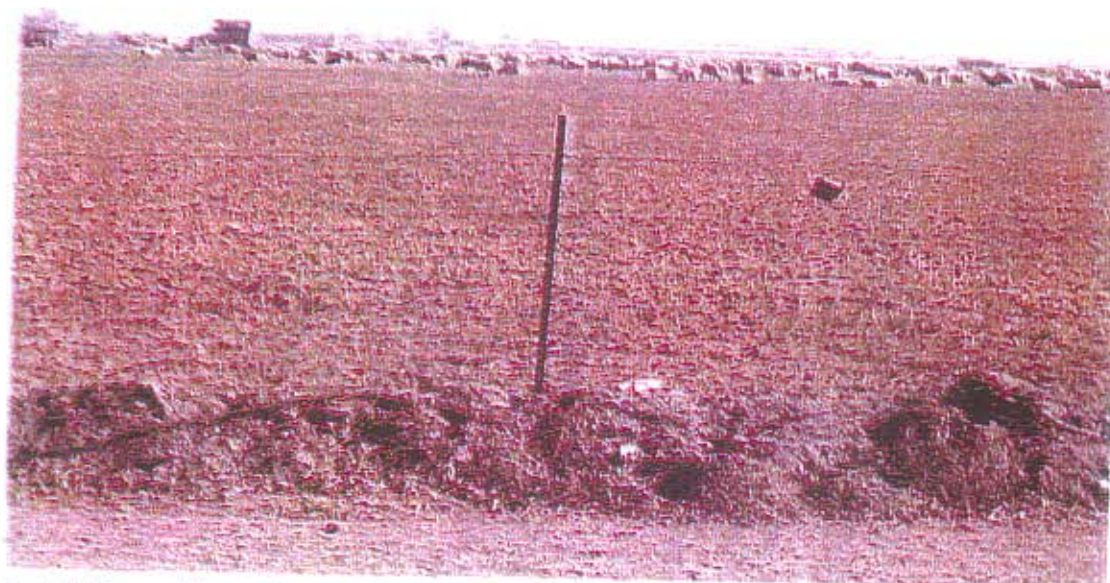


Photo 7. Pasture. View to the east.

LSA

FIGURE 3B

Chino Reserve
Site Photographs



Photo 8. Active agricultural field. View to the west.



Photo 9. Active agricultural field. View to the southwest.

LSA

FIGURE 4A

Chino Reserve
Site Photographs

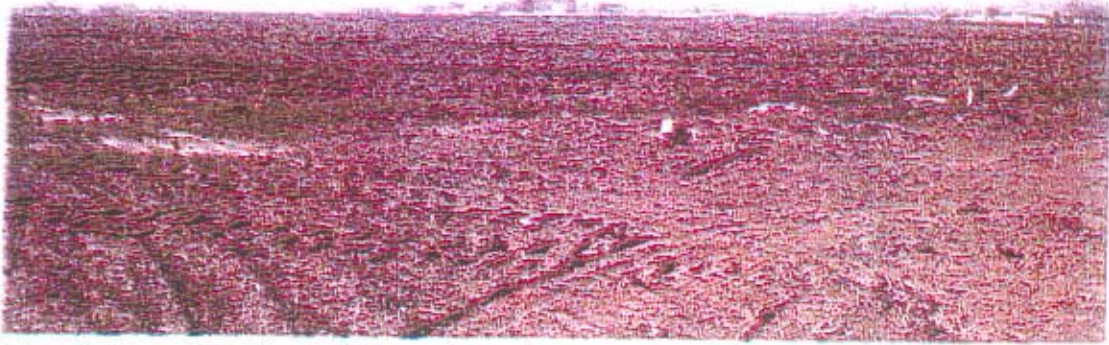


Photo 10. Active agricultural field. View to the south.



Photo 11. Active agricultural field. View to the north.

LSA

FIGURE 4B

Chino Reserve
Site Photographs



Photo 12. Fallow. View to the northeast.



Photo 13. Fallow. View to the east.

LSA

FIGURE 5A

Chino Reserve
Site Photographs



Photo 14. Fallow. View to the southwest.

LSA

FIGURE 5B

Chino Reserve
Site Photographs



Photo 15. Grassland. View to the south.



Photo 16. Grassland. View to the southwest.

LSA

FIGURE 6

Chino Reserve
Site Photographs

APPENDIX E

OPEN SPACE USES

Open Space Designations

The open space land use designations are divided into five land use designations: Agriculture, Open Space-Recreation, Agriculture/Open Space-Natural, Open Space-Natural and Open Space-Water. Each subcategory includes a description of the intended character, allowable uses, and development standards as summarized in Table 5.

The open space land use designations address a specific range of uses intended to help preserve the historic, agriculture character of Chino and to protect open space and biological resources.

Most of the land within the open space designations is also within the 566-foot elevation dam inundation area. The open space designations within this area have been designed to recognize flood hazards and support and protect the biological habitat and open space resource values inherent in this area from incompatible land uses that could damage these resources.

Agriculture (AG)

- AG1 Intended character: The Agricultural Land Use Designation is intended to provide for agricultural uses including farming, stables, pastures, and grazing. Uses and structures in AG designated areas below the 566' dam inundation elevation must comply with the requirements of the Dam Inundation Overlay, and must also comply with the Resource Management Plan which provides for the protection and enhancement of biological resources.
- AG2 Permitted Land Uses
- a. Commercial row, field, tree and nursery crops cultivation.
 - b. Grazing.
 - c. Nurseries
 - d. Conservation and habitat enhancement areas
 - e. Uses permitted by the General Agriculture Zone, Section 20.11.030 of the Zoning Ordinance except as modified herein and as restricted by the Dam Inundation Overlay.
 - f. 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.
- AG3 Uses Subject to a Special Conditional Use Permit
- a. Per the Conditionally Permitted Land Uses for the AG zone, Section 20.11.030 of the Zoning Ordinance, except as modified herein and as restricted by the Dam Inundation Overlay.
 - b. Kennels and Catteries outside the Dam Inundation Overlay.
- AG4 Administratively Permitted and Incidental Uses
- a. As allowed by the AG zone, Section 20.11.030 of the Zoning Ordinance.
- AG5 Prohibited Uses
- a. New dairies and expansions of existing dairies, calf nurseries and other similar intense animal uses are prohibited within the Dam Inundation Overlay (area below the 566' elevation).
 - b. Animal clinics and hospitals.
 - c. Animal Keeping in excess of established density standards as specified in Section 20.11.030 of the zoning ordinance, for AG designated properties within the Dam Inundation Overlay.

- d. Cemeteries
- e. Kennels and catteries within the Dam Inundation Overlay.
- f. Educational Services as they are specified by Section 20.11.030 of the Zoning Ordinance, except that home schools are a permitted use.
- g. Storefront Worship Facilities, as specified by Section 20.11.030 of the Zoning Ordinance, within the Dam Inundation Overlay.

AG6 Development Regulations

- a. Minimum lot size: 10 Acres.
- b. Minimum lot width: None.
- c. Minimum front setback: 25 ft.
- d. Minimum side and rear setbacks: None.
- e. Maximum site coverage: None.
- f. Maximum building height: 35 ft.
- g. 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.

AG7 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. Portions of the AG Land Use Designation are 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 designation must comply with the requirements and guidelines of the RMP.

<i>Land Use Designation</i>	<i>Agriculture</i>	<i>Agriculture/Open Space-Natural</i>	<i>Open Space-Recreation</i>	<i>Open Space-Natural</i>
Development Requirements				
Minimum Lot Size	10 Acres	None	None	None
Minimum Lot Width	None	None	None	None
Minimum Front Setback	25 ft.	None	None ²	None
Minimum Side and Rear setbacks	None	None	None ²	None
Maximum Site Coverage	None	None	None	None
Maximum Building Height	35 ft.	35 ft.	35 ft.	35 ft.

Agriculture/Open Space-Natural (AG/OSN)

A/OS1 Intended character: The Agricultural/Open Space-Natural Land Use Designation is intended to provide for limited agricultural and open space uses, including passive recreation, trails, crop farming, and open space. It is also intended to protect important biological resources found within lands designated AG/OSN from incompatible land uses that could damage these resources. Land uses in AG/OSN designated areas must be compatible and coordinated with the Resource Management Plan, which provides for the protection and enhancement of biological resources. They must also comply with the requirements of the Dam Inundation Overlay.